

BIBLIOGRAPHY
of the
Geology of Missouri

By
DARLING K. GREGER



Vol. XXXI, Second Series

EDWARD L. CLARK, *State Geologist and Director*

MISSOURI GEOLOGICAL SURVEY
AND WATER RESOURCES

ROLLA, MISSOURI

1945

X44494

MID-STATE PRINTING CO., JEFFERSON CITY, MO.



Contents



	Page
Letter of Transmittal.....	4
Preface.....	5
Introduction.....	6
Abbreviations.....	8
Bibliography.....	10
Counties.....	189
Economic Geology, Mining and Metallurgy.....	208
Mineralogy.....	224
Petrology and Petrography.....	233
Stratigraphy.....	235
Paleontology.....	269
Physiography.....	278
Structural Geology.....	282
Geological Maps.....	284
Miscellaneous Subjects.....	291

Letter of Transmittal



Rolla, Missouri
April 30, 1945

Honorable Phil M. Donnelly,
Governor of Missouri,
Jefferson City, Missouri.

Dear Governor Donnelly:

I have the honor and pleasure to transmit herewith THE BIBLIOGRAPHY OF THE GEOLOGY OF MISSOURI, by Darling K. Greger.

The publication of the bibliography is of paramount value at this time. Many requests are made of the Missouri Geological Survey and Water Resources for references on various geological subjects. This compilation will be of definite value to those interested in the economic development of the mineral resources of the State; it will also meet the need of the academic geologist who is interested in the science of geology. The first section of the bibliography lists the publications by authors. The second section is a cross reference to publications pertaining to specific subjects and economic products.

Respectfully submitted,

EDWARD L. CLARK,
State Geologist.

Preface



EDWARD L. CLARK

The compilation of the bibliography was started by Mr. Darling K. Greger¹ under the supervision of Dr. H. A. Buehler, deceased, State Geologist of Missouri. After the death of Dr. Buehler the compilation was continued and the preliminary manuscript submitted in May, 1944. To give greater utility to the bibliography the second section was expanded and reorganized by Dr. Percival Robertson² during the summer months of 1944. Final reorganization and editing were completed by Messrs. Albert Kidwell and Richard S. Watson³.

The Missouri Geological Survey and Water Resources is indebted to many organizations and individuals for assistance in making this bibliography as complete as possible. Acknowledgements are especially due to: University of Missouri, Graduate School and Department of Geology for the availability of unpublished theses; University of Missouri School of Mines and Metallurgy for unpublished theses; Washington University, St. Louis, Missouri, for unpublished theses; and the United States Geological Survey for titles of recent date which have not been included in published bibliographies of that agency.

¹Fulton, Missouri, retired. Mr. Greger temporarily stepped out of retirement to compile this bibliography.

²Professor of Geology, The Principia College, Elsah Illinois. Geologist, summer appointment, Mo. Geol. Survey.

³Geologists, Mo. Geol. Survey.

Introduction



This bibliography is concerned with the literature of the various branches of geology and some phases of its allied sciences as they are found in the State of Missouri. The present volume is the fourth bibliography to be published by the Missouri Geological Survey, previous ones having appeared in 1855, 1890 and 1896. The majority of the geological literature dealing with Missouri has been written since the publication of the last bibliography, and the need for a new, comprehensive bibliography has become acute.

It is believed that most of the important titles concerned with the geology of Missouri have been included. A limited number of references describing areas adjacent to Missouri have been listed. Unquestionably some references have been missed. Where such omissions are apparent to the reader of the volume, the titles should be referred to the Missouri Geological Survey in order that they may be added to future revisions.

Suggestions on using the bibliography: When looking for an article in the bibliography one should find the name of the author in the first section of the book, the bibliography proper. In instances where a reference has two or more authors, it is listed only under the name of the senior author. Beneath the name of the author will be found a list of all the articles written by that person, each identified by a number at the left and arranged in chronological order. The name of the citation is followed by a statement indicating the publication in which it appeared. Next is indicated the series number—if it has been issued in several series, followed by the volume, the number, the page or pages, and the date of publication. The place of publication is shown where this is deemed necessary. If the article was published as a book, the city and the name of the publisher are both included. A large number of abbreviations have been used in accordance with *Suggestions to Authors of the United States Geological Survey*, and a list of these abbreviations has been included.

In order to find what has been written about a given subject one should look for the topic in the second section of the bibliography. Under each topic will be found a list of references on that particular subject, each citation being followed by the name of the author and the number of the article. By referring back to the bibliography proper, the time and place of publication may be determined. It should be kept in mind that this index is not intended to be exhaustive. An attempt has been made to list only the more important references under each topic.

Much of the available information of the geology of Missouri has never been published. The Missouri Geological Survey is maintained for the benefit of the citizens of Missouri and is ready at all times to assist the public by giving information and assistance on geological subjects.

Abbreviations



Acad.—academy	fold.—folded
Adj.—adjourned	front.—frontispiece
Agri.—agriculture, agricultural	Gaz.—gazette
Am.—American	gen.—genus
Ann.—annual	Geog.—geographical
app.—appendix	Geol.—geological
apps.—appendices	Geophys.—geophysical
approx.—approximate, approxi- mately	Hist.—history, historical
Assoc.—association	il.—illustrated
Bibl.—bibliography	ills.—illustrations
Bienn.—biennial	incl.—including
Bol.—Boletin	Ind.—industry
Bot.—botanical	Indus.—industrial
Bull.—bulletin	Inf.—information
Bur.—bureau	Inst.—institute
Can.—Canadian	Internat.—international
Chem.—chemical	Inv.—investigations
Circ.—Circular	Jahrb.—Jahrbuch
Co.—county, company	Jour.—journal
Cos.—counties	Knowl.—knowledge
Col.—collection	Mag.—magazine
Coll.—college	Met.—metallurgy, metallurgical
Comm.—commercial	Min.—mining
Comp.—comparative	Misc.—miscellaneous
Conf.—conference	ms.—manuscript
Cong.—congress	Mtg.—meeting
Contr.—contributions	Mus.—museum
Conv.—convention	Nat.—national, natural
Dept.—department	no.—number
Diss.—dissertation	nos.—numbers
Doc.—document	Occas.—occasional
Econ.—economic	opp.—opposite
ed.—edited, edition	Pan-Am.—Pan-American
Eng.—engineers, engineering	Philos.—philosophical
Engl.—England	Phys.—physical
etc.—and so forth	pl.—plate
et. seq.—et sequentes	pls.—plates
Ex.—executive	Pop.—popular
Exp.—experiment, experimental	portr.—portrait
fasc.—fasciculus	p.—page
fig.—figure	pp.—pages
figs.—figures	Prest.—presented
fol.—folio	Priv.—private
	Proc.—proceedings

ABBREVIATIONS—Continued.

Prof.—professional
pt.—part
pts.—parts
Pub.—publication
Quart.—quarterly
Reg.—regents
Rept.—report
Rev.—review
Sci.—science
Seismol.—seismological
Sen.—senate
ser.—series
sess.—session

Soc.—society
sp.—species
Sta.—station
Summ.—summary
Suppl.—supplement
t.—tomo
Tech.—technical
Top.—topographic
Trans.—transactions
Univ.—university
U. S.—United States
vol.—volume

Bibliography



Abbot, H. L. Refer to Humphreys, A. A.

Abert, J. W.

1. Journal from Bent's Fort to St. Louis in 1846: Message Prest. U. S. 29th Cong., 1st sess., Senate Doc. no. 438, pp. 2-75, 12 pls., maps, 1846.

Adams, George I. Refer also to Crane, W. R.

1. Physiography and geology of the Ozark region: U. S. Geol. Survey 22d Ann. Rept., pt. 2, pp. 69-94, 3 pls., 3 figs., 1901.
- 1A. (and Girty, H., and White, D.), Stratigraphy and paleontology of the upper Carboniferous rocks of the Kansas section: U. S. Geol. Survey Bull. 211, 101 pp., 4 pls., 10 figs., 1903.
2. (and Haworth, E., and Crane, W. R. O.). Economic geology of the Iola quadrangle, Kansas (Contains geologic map of southwest Missouri.): U. S. Geol. Survey Bull. 238, 83 pp. 11 pls., 13 figs., 1904.
3. (and Ulrich, E. O.). Description of the Fayetteville quadrangle, Arkansas-Missouri: U. S. Geol. Survey Geological Atlas, Fayetteville folio, no. 119, 6 pp., maps, 1905.

Adams, J. Q.

1. Geography of the North Kansas City region: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1930.

Adams, Robert McCormick.

1. Early man in eastern Missouri (abstract): Geol. Soc. America Bull., vol. 52, no. 12, pt. 2, p. 1993, December 1, 1941; St. Louis Acad. Sci. Trans., vol. 30, no. 5, pp. 151-221, 13 pls., May 31, 1941.

Agar, W. M.

1. Chertification in the Tri-State (Oklahoma-Kansas-Missouri) mining district: Am. Inst. Min. Met. Eng. Tech. Pub., no. 532, 50 pp., 1934.

Ageton, Richard Valentine.

1. Principal ore guides used in the Tri-State District: U. S. Geol. Survey (Memorandum for the press, P.N. 56947), 4 pp., map, 1931.

Aid, Kenneth. Refer to McQueen, H. S.

Albertson, M. Refer also to McCourt, W.

1. Geology of a Carboniferous outlier in Lawrence County, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1911.

Albrecht, William Albert.

1. (and Vanderford, H. B.). The development of loessial soils in central United States as it reflects differences in climate: Univ. of Missouri, Agri. Exp. Sta. Research Bull. 345, 31 pp., 1942.

Alden, William Clinton.

1. Quaternary period of the Mississippi River Basin: International Geol. Congress, 16th session, Guidebook 26, pp. 1-12, Washington, 1932.
2. (and Leighton, Morris M.). The Iowan drift, a review of the evidences of the Iowan stage of glaciation: Iowa Geol. Survey Ann. Rept., vol. 26, pp. 49-212, 1917.

Alexander, A. E.

1. The dustfall of November 13, 1933: Am. Mineralogist, vol. 19, pp. 230-231, 1934.

Allen, Eugene Thomas.

1. Native iron in the Coal Measures of Missouri: Am. Jour. Sci., 4th ser., vol. 4, pp. 99-104, 1897.

Allen, Paul.

1. History of the expedition under the command of Captains Lewis and Clark to the sources of the Missouri, thence across the Rocky Mountains and down the river Columbia to the Pacific Ocean, performed during the years 1804-5-6, Geol. notes, pp. 29, 49-51, 62, 193, 230, 270, 333, 397, 455, 2 vols., 470 pp. and 522 pp., Philadelphia, 1814.

Allen, Rolland Craten.

1. Memorial to Henry Andrew Buehler (1876-1944): Mining and Metallurgy, vol. 25, no. 449, p. 283, 1 fig. portr., May 1944.

Allen, Victor Thomas. Refer also to Farrar, W.

1. Ordovician bentonite in Missouri (abstract): Geol. Soc. America Bull., vol. 42, no. 1, pp. 224-225, March 31, 1931; Pan-Am. Geologist, vol. 55, no. 4, p. 311, May 1931.
2. Ordovician altered volcanic materials in Iowa, Wisconsin, and Missouri: Jour. Geology, vol. 40, no. 3, pp. 250-269, 4 figs., April-May 1932.
3. Mineral composition and origin of the Porters Creek formation of southeastern Missouri (abstract): Geol. Soc. America Proc. 1933, pp. 380-381, June 1934.
4. Petrography and origin of the fuller's earth of southeastern Missouri: Econ. Geology, vol. 29, no. 6, pp. 590-598, 4 figs., September-October 1934; Missouri Geol. Survey and Water Resources, 58th Bienn. Rept. State Geologist, 1933-34, app. 1, pp. 72-78, 1 plate, 1935.
5. Mineral composition and origin of Missouri flint and diaspore clays: Missouri Geol. Survey and Water Resources, 58th Bienn. Rept. State Geologist, 1933-34, app. 4, 24 pp., 2 figs., 4 pls., map, 1935.

6. Aluminum hydrates in Missouri diaspore deposits (abstract): *Geol. Soc. America Proc.*, 1934, p. 63, June 1935.
7. A mineralized spherulitic limestone in the Cheltenham fire clay: *Am. Mineralogist*, vol. 21, no. 6, pp. 369-373, 2 figs., June 1936; (abstracts), *Pan-Am. Geologist*, vol. 65, no. 2, p. 159, March 1936; *Geol. Soc. America Proc.*, 1935, p. 435, June 1936.
8. Dickite from St. Louis County, Missouri: *Am. Mineralogist*, vol. 21, no. 7, pp. 457-459, 2 figs., July 1936.
9. Terminology of medium grained sediments (with notes by P. G. H. Boswell): *Nat. Research Council Ann. Rept.*, app. 1, Rept. of committee on sedimentation, pp. 18-47, September 1936.
10. The Cheltenham clay of Missouri: *Missouri Geological Survey and Water Resources*, 59th Bienn. Rept. State Geologist, 1935-36, app. 5, pp. 29, 5 pls., 1937.
11. Minerals of the Cheltenham clay (abstract): *Geol. Soc. America Proc.*, 1936, p. 60, June 1937.
12. A study of Missouri glauconite: *Missouri Acad. Sci. Proc.*, vol. 3, no. 4, p. 120, 1937; *Am. Mineralogist*, vol. 22, pp. 1180-1183, 1937.

Ambler, J. O. Refer to Black, J. K.

Anderson, C. O. Refer also to Coghill, W. H.

1. Flotation in the Tri-State District in 1925: *Bull. Am. Zinc Inst.*, May-June 1926.
2. Growth of flotation in the Tri-State District: *Eng. and Min. Jour.* vol. 121, p. 982, 1926.

Anderson, P. B.

1. (and Kersting, F. J.). Water supply of Rolla, Missouri: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1897.

Andrews, D. A.

1. The trilobites of the Kinderhookian of Missouri: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1928.

Andrews, E.

1. Dr. Koch and the Missouri mastodon: *Am. Jour. Sci.*, 3d ser., vol. 10, pp. 32-34, 1875.

Antevs, Ernst.

1. Maps of the Pleistocene glaciations (Rept. of the Glacial Committee of the *Geol. Soc. of American* for 1928): *Geol. Soc. America Bull.*, vol. 40, pp. 631-720, 1929.

Armstrong, S.

1. Coal production in Missouri in 1883-84: *Mineral Resources U. S.*, 1883-84, pp. 12, 51-52, 1885.

Arnold, A.

1. Morgan County, Missouri. Pen pictures of its unsurpassed advantages of soil, climate, timber, water power and rich mineral resources, schools, society, etc.: 20 pp., Versailles, Missouri, 1887.
2. Coal fields adjacent to Springfield: Proc. Inter-State Mining Convention, pp. 68-69, December 1891.
3. A marvelous Missouri spring (Hahatonka, or Gunter Spring): Proc. Inter-State Mining Convention, pp. 102-104, December 1891.

Arnold, Chester Arthur.

1. (and Steidtmann, W. E.). Pteridospermous plants from the Pennsylvanian of Illinois and Missouri: *Am. Jour. Botany*, vol. 24, no. 9, pp. 644-650, 14 figs., November 1937.

Aschmeyer, Esther Louise.

1. The urban geography of the clay products industries of metropolitan St. Louis: Washington University, unpublished thesis, 116 pp., 63 figs., St. Louis, Missouri, 1943.

Ashburner, Charles Albert.

1. Coal production in Missouri in 1885: *Mineral Resources U. S.*, 1885, pp. 11, 35-36, 1886.
2. Coal production in Missouri in 1886: *Mineral Resources U. S.*, 1886, pp. 230, 280-282, 1887.
3. Natural gas in Missouri: *Am. Manufacturer*, vol. 41, no. 26, p. 13, 1887.
4. Coal production in Missouri in 1887: *Mineral Resources U. S.*, 1887, pp. 171, 272-275, 1888.
5. Coal production in Missouri in 1888: *Mineral Resources U. S.*, 1888, pp. 206, 285-287, 1889.

Ashley, George H.

1. Cannel coal in the United States: *U. S. Geol. Survey Bull.* 659, pp. 52-53, 114-119, 1918.

Athy, L. F.

1. Density, porosity and compaction of sedimentary rocks: *Am. Assoc. Petroleum Geologists Bull.*, vol. 14, no. 1, pp. 1-25, January 1930.

Austin, Moses.

1. Description of the lead mines in upper Louisiana, extracted from the "American State Papers", *Public Lands*, vol. 1, p. 188, communicated to Congress November 8, 1804; *State of Missouri*, Garland C. Broadhead, State Geologist, Jefferson City, 1874.

Babcock, E. N.

1. (and Minor, J.). The Graydon sandstone and its mineral waters: *Bradley Geol. Field Station Bull.*, Drury College, vol. 1, pt. 1, pp. 22-31, Springfield, Missouri, 1904.

Bagnara, Sergio.

1. Laws of distribution of lead in southeast Missouri ores: *Eng. and Min. Jour.*, vol. 103, no. 24, pp. 1056-58, June 16, 1917.

Bailey, L.

1. The geology of the Ozora District of Ste. Genevieve County, Mo.: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1921.

Bailey, Willard Francis.

1. Micropaleontology and stratigraphy of the lower Pennsylvanian of central Missouri: *Jour. Paleontology*, vol. 9, no. 6, pp. 483-502, 1 pl., 3 figs., September 1935; Univ. of Missouri, thesis, Columbia, Missouri, 1934.

Bain, Harry Foster.

1. Structure of the Mystic coal basin (Iowa and Missouri): *Iowa Acad. Sci. Proc.*, vol. 1, pt. 4, pp. 33-36, 1894.
2. Peculiarities of the Mystic coal seam (Iowa and Missouri): *Am. Geologist*, vol. 13, pp. 407-411, 1894.
3. The Bethany limestone at Bethany, Missouri. *Am. Jour. Sci.*, 4th ser., vol. 5, pp. 433-439, 1898.
4. (and Leonard, A. G.). The middle Coal Measures of the western interior coal fields: *Jour. Geology*, vol. 6, pp. 577-588, 1898; (abstracts) *Science*, new ser., vol. 8, p. 464, 1898; *Am. Geologist*, vol. 22, p. 251, 1898; *Geol. Soc. America Bull.*, vol. 10, pp. 10-12, 1898.
- 4A. The western interior coal field of America: *New Engl. Inst. Min. Eng. Trans.*, vol. 48, pp. 55-80, 1898.
5. The origin of the Joplin ore deposits (abstract): *Eng. and Min. Jour.*, vol. 71, p. 557, 1901.
6. Lead and zinc deposits of the Ozark region: *U. S. Geol. Survey 22d Ann. Rept.*, pt. 2, pp. 23-227, maps, 1901.
7. The western interior coal field: *U. S. Geol. Survey 22d Ann. Rept.*, pt. 3, pp. 333-366, 1 fig., 3 pls., 1902.
8. The origin of ore deposits (discussion): *Am. Inst. Min. Eng. Trans.*, vol. 31, pp. 936-942, 1902.
9. (and Van Hise, C. R.). Lead and zinc deposits of the Mississippi Valley, U. S. A.: *Inst. Min. Eng. Trans.*, vol. 23, pp. 376-434, incl. maps, 1902.
10. The zinc deposits of Missouri: *Lead and Zinc News*, vol. 8, pp. 223-225, 1904.
11. (and Ulrich, E. O.). Contributions to Economic Geology, 1904, The copper deposits of Missouri: *U. S. Geol. Survey Bull.* 260, pp. 233-235, 1905.
12. Contribution to Economic Geology, 1904, Lead and zinc resources of the United States: *U. S. Geol. Survey Bull.* 260, pp. 251-273, 1905.
13. (and Ulrich, E. O.). The copper deposits of Missouri: *U. S. Geol. Survey Bull.* 267, 52 pp., 1905.
14. Structural features of the Joplin district: *Econ. Geology*, vol. 1, pp. 172-174, 1905.

15. Zinc and lead ores: Mineral Resources U. S., 1905, pp. 379-392, 1906.
16. Some relations of paleogeography to ore deposition in the Mississippi Valley: Tenth International Geological Congress, Mexico, 1906, *Compte Rendus*, pp. 483-499, 1907; *Econ. Geology*, vol. 2, pp. 128-144, 1907.
17. Review of special report on lead and zinc by E. Haworth and others: *Kansas Univ. Geol. Survey*, vol. 8; *Econ. Geology*, vol. 2, pp. 186-192, 1907.
18. (and others). Types of ore deposits: 378 pp., San Francisco, 1911.
19. Studies of Joplin ore deposits: *Mining Magazine* (London), vol. 14, pp. 206-212, map, 1916.

Ball, John Rice. Refer also to Flint, R. F. and Kansas Geological Society guidebooks, Conferences 1935 and 1939.

1. The faunas of the Brassfield and Bainbridge limestones of southeastern Missouri (abstract): *Chicago Univ. Abstracts of Theses Sci. ser.*, vol. 5, pp. 261-269, October 1928.
2. The Silurian faunas of southeastern Missouri: *Illinois State Acad. Sci. Trans.*, vol. 21, pp. 326-328, February 1929.
3. Brachiopoda of certain Silurian horizons of southeastern Missouri (abstract): *Geol. Soc. America Bull.*, vol. 40, no. 1, p. 213, March 30, 1929.
4. Faunal list from the type section of the Bainbridge limestone of Missouri (abstract): *Geol. Soc. America Bull.*, vol. 42, no. 1, p. 352, March 31, 1931; *Pan-Am. Geologist*, vol. 55, no. 2, p. 152, March 1931.
5. (and Dunn, P. H.). Some new species of *Camarotoechia* from the Bainbridge limestone of Missouri: *Illinois State Acad. Sci. Trans.*, vol. 24, no. 2, pp. 280-390, 1 pl., December 1931.
6. *Bainbridgia typicalis*; new genus and species of Siluric Auloporidae (abstract): *Pan-Am. Geologist*, vol. 59, no. 3, pp. 239-240, April 1933.
7. (and Dunn, P. H.). Tentative Silurian correlations in the Mississippi Basin (abstract): *Geol. Soc. America Proc.*, 1933, pp. 342-343, June 1934.
8. Problematical rhynchonelloid from the Silurian of southeastern Missouri (abstract): *Geol. Soc. America Proc.*, 1933, p. 343, June 1934.
9. (and Maxwell, R. A.). Correlation notes on the Bainbridge formation of Missouri and Henryhouse formation of Oklahoma (abstract): *Geol. Soc. America Proc.*, 1935, p. 391, June 1936.
10. New species of corals from the Bainbridge limestone of southeastern Missouri (abstract): *Geol. Soc. America Proc.*, 1937, p. 268, June 1938.
11. Type section of the Bainbridge of southeastern Missouri: *Am. Assoc. Petroleum Geologists Bull.*, vol. 23, no. 4, pp. 595-601, 3 figs., April 1939.
- 11A. Stratigraphy of the Silurian system of the lower Mississippi Valley: *Kansas Geol. Soc. Guidebook*, 13th Ann. Field Conf., pp. 110-126, 1939.

12. Some Silurian correlations in the lower Mississippi drainage basin (abstract): *Oil and Gas Jour.*, vol. 38, no. 48, p. 63, April 11, 1940.
13. (and Grove, B. H.). New species of corals from the Bainbridge limestone of southeastern Missouri: *Am. Midland Naturalist*, vol. 24, no. 2, pp. 382-404, 4 pls., September 1940.
14. (and Delo, D. M.). New species of Silurian *Dalmanites* from southwest Missouri: *Am. Midland Naturalist*, vol. 24, no. 2, pp. 404-410, 12 figs., September 1940.
15. Silurian lithology in western Tennessee and adjacent states: *Geol. Soc. America Bull.*, vol. 52, pp. 117-127, 1941.

Ball, Sydney Hobart. Refer also to Buckley, E. R.

1. (and Smith, A. F.). The geology of Miller County: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 1, 197 pp. 56 figs., 18 pls., 1903.
2. The deposition of the Carboniferous formations of the north slope of the Ozark uplift: *Jour. Geol.*, vol. 12, pp. 335-343, 1904.
3. The lead mines of Washington Co., Missouri: *Mining and Scientific Press*, (San Francisco) 1916.
4. (and Singewald, J. T.). Discussion of "An alnoite pipe, its contact phenomena and ore deposition near Avon, Missouri": *Jour. Geology*, vol. 38, pp. 456-459, 1930.

Ballard, F. A.

1. Mastodon remains found in Jackson County, Missouri: *Kansas City Rev. Sci.*, vol. 3, pp. 642-644, 1880.

Banks, L. M.

1. Mining methods and costs in the Waco District: *U. S. Bureau of Mines Inf. Circ.* 6150, 10 pp., 12 figs., 1929.

Barnard, C. R.

1. (and Wills, R. B., and Zieseniss, H. W.). Preliminary study of possible power development on the Gasconade River: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1920.

Barnes, James Virgil.

1. Geology of the northern one-half of the Montgomery City quadrangle, Callaway and Montgomery Counties, Missouri: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1943.

Barney, Joshua.

1. Survey of route from St. Louis to Fulton, made in 1859 by the Bureau of Topographical Engineers, War Dept.: Washington, 1850.
2. Report of a survey from St. Louis to the Big Bend of Red River, by the Bureau of Topographical Engineers, War Dept.: Washington, 1852.

Barr, Joe William.

1. The geography of the water supply of metropolitan St. Louis: *Washington University*, unpublished thesis, 121 pp., 111 figs., St. Louis, Missouri, 1937.

Barrett, H. H.

1. Geology of the Calwood area, Callaway County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Bartholomaeus, George.

1. Twenty-second Annual Report of the Bureau of Mines, Mining and Mine Inspection of the State of Missouri for the year ending December 31, 1908: 174 pp., 1 chart, Jefferson City, Missouri, 1909.
2. Twenty-third Annual Report of the Bureau of Mines, Mining and Mines Inspection of the State of Missouri for the year ending December 31, 1909: 359 pp. 9 charts, Jefferson City, Missouri, 1910.
3. Twenty-fourth Annual Report of the Bureau of Mines, Mining and Mines Inspection of the State of Missouri for the year ending December 31, 1910: 175 pp., 4 charts, Jefferson City, Missouri, 1911.
4. Twenty-fifth Annual Report of the Bureau of Mines, Mining and Mine Inspection of the State of Missouri for the year ending December 31, 1911: 160 pp., 5 charts, Jefferson City, Missouri, 1912.

Bartle, Glenn G.

1. The geology of the Blue Springs gas field, Jackson County, Missouri: Missouri Bur. Geol. and Mines, 57th Bienn. Rept. State Geologist. 1931-32, app. 3, 64 pp., 1 fig., (map), 5 pls. (incl. maps), 1933; (discussion) Am. Assoc. Petroleum Geologists Bull., vol. 17, no. 12, pp. 1536-1537, December 1933.
2. Some unusual sandstone thickness in the Pennsylvanian of Jackson County, Missouri: Missouri Acad. Sci. Proc., vol. 1, pp. 123-130, 1935.
3. (and Speer, H. and Schuett, E.). The Mosby sandstone cave, Clay County, Missouri (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, p. 123, 1937.
4. Subsurface study of Cherokee formation near Kansas City, Missouri: Am. Assoc. Petroleum Geologists Bull., vol. 22, no. 7, pp. 918-924, 2 figs., incl. index map, July 1938.
5. Effective porosity of gas fields of Jackson County, Missouri: Am. Assoc. Petroleum Geologists Bull., vol. 25, no. 7, pp. 1405-1409, 1 fig., map, 1941.

Barton, Donald Clinton.

1. Notes on the Mississippian chert of the St. Louis area: Jour. Geology, vol. 26, pp. 361-374, 1918.

Bassler, Ray Smith. Refer also to Nickles, J. M. and Ulrich, E. O.

1. Notes on an unusually fine slab of fossil crinoids (*Scyphocrinus*): U. S. Nat. Mus. Proc., vol. 46, pp. 57-59, il., 1913.
- 1A. Bibliographic index of American Ordovician and Silurian fossils: U. S. Nat. Mus. Bull. 92, vol. 2, pt. 4, 1915.
2. The paleozoic rugose coral family Paleocyclidae: Jour. Paleontology, vol. 11, no. 3, pp. 189-201, 3 pls., April 1937.

Bastin, Edson Sunderland.

1. Relations of cherts to strololites at Carthage, Missouri: *Jour. Geology*, vol. 41, no. 4, pp. 371-381, 10 figs., May-June 1933.
2. (and other). Contributions to a knowledge of the lead and zinc deposits of the Mississippi Valley (A symposium): *Geol. Soc. America Special Paper* 24, 156 pp., 27 figs., 4 pls., December 30, 1939.

Bayley, W. S. Refer to Ries, H.

Beachler, Charles S.

1. Keokuk group of Mississippi Valley: *Am. Geologist*, vol. 10, pp. 88-96, 1892.

Beatty, C. E.

1. (and Snow, J. F.). Joplin, Missouri, Mining and Industrial Interests: Published by C. E. Beatty and James F. Snow, under direction of Kansas City, Fort Scott and Memphis Railroad; Kansas City, Missouri, Hudson-Kimberly Pub. Co., 47 pp., map of Joplin, ill., 1890.

Becker, L. E.

1. Ostracodes from the Snyder Creek shale of Callaway and Montgomery Counties, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Beckman, H. C.

1. Water resources of Missouri: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 20, 424 pp., 1927.
2. Surface waters of Missouri, 1927-1939: *Missouri Geol. Survey and Water Resources*, 2d ser., vol. 26, 900 pp., 1940.
3. (and Hinchey, Norman). The large springs of Missouri: *Missouri Geol. Survey and Water Resources*, 2d ser., vol. 29, 141 pp., colored front., 18 pls., 3 figs. incl. maps, 1944.

Beebe, B. W.

1. Catalog of formation names of central and northeastern Missouri and adjacent parts of Illinois: *Kansas Geol. Soc. Guidebook*, 5th Ann. Field Conf., pp. 111-119, (planographed) Wichita, Kansas, 1941.

Beecher, Charles Emerson.

1. Note on the Cambrian fossils of St. Francois Co., Missouri: *Am. Jour. Sci.*, 4th ser., vol. 12, pp. 362-363, 1901; *Geological Magazine*, London, 4th ser., vol. 8, pp. 559-561, 1901.
2. Discovery of eurypterid remains in the Cambrian of Missouri: *Am. Jour. Sci.*, 4th ser., vol. 12, pp. 364-366, il., 1901; *Geological Magazine*, London, 4th ser., vol. 8, pp. 561-564, il., 1901.

Beede, Joshua William.

1. New and little known pelecypods from the Coal Measures: *Kansas Univ. Quart.*, vol. 8, pp. 131-134, il., 1899.

2. (and Rogers, A. F.). Coal Measures faunal studies: Kansas Univ. Quart., vol. 9, pp. 233-254, 1900.
3. Two new crinoids from Kansas Carboniferous: Kansas Univ. Quart., vol. 9, pp. 21-24, il., 1900.
4. (and Rogers, A. F.). Coal Measures faunal studies; Faunal divisions of the Kansas Coal Measures: Kansas Univ. Geol. Survey, vol. 9, pp. 318-385, 1 pl., 1908.

Belden, A. W.

1. Coking tests of Missouri coal: U. S. Geol. Survey Bull. 332, p. 168, 1908.
2. Coking tests of Missouri coal: U. S. Geol. Survey Bull. 336, pp. 23, 30, 39, 1908.

Berkey, Charles Peter.

1. Paleogeography of St. Peter time (abstract): Science, new ser., vol. 21, p. 221, 1905; Sci. Am. Suppl., vol. 59, p. 24327, 1905.

Bell, Alfred H.

1. Developments (oil and gas) in eastern interior basin, 1939 and 1940: Am. Assoc. Petroleum Geologists Bull., vol. 24, no. 6, pp. 959-969, 6 figs., index and map, June 1940; vol. 25, no. 6, pp. 1114-1124, 4 figs. incl. index and isopach maps, June 1941; (abstracts), vol. 26, no. 5, p. 94, May 1941; Illinois Geol. Survey Press Bull. 36, July 15, 1940; 38, September 13, 1941; Oil and Gas Jour., vol. 38, no. 48, p. 49, April 11, 1940.
2. Developments (oil and gas) in Eastern Interior Basin in 1943 (abstract): Dallas Digest, pp. 119-120, Dallas, Texas, 1944.

Benham, W. M.

1. (and Elliott, W.). Geological mapping of an area along the Frisco railroad, between Cuba and St. James: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1915.

Bennett, J. W. Refer to McCourt, W.

Bennett, John. Refer to Haworth, E.

Berry, E. W.

1. Northernmost extension of marine Eocene beds in Mississippi embayment: Pan-Am. Geologist, vol. 37, no. 1, pp. 75-76, February 1922.

Birkenhauer, Henry F.

1. The Illinois earthquake of November 23, 1939 (abstract): Missouri Acad. Sci. Proc. 1940, vol. 6, no. 4, p. 91, March 25, 1941.
2. The structure of the earth's crust east and north of St. Louis (abstract): Missouri Acad. Sci. Proc. 1941, vol. 7, no. 4, p. 112, January 25, 1942.

Birkinbine, J.

1. Prominent sources of iron-ore supply: Am. Inst. Min. Eng. Trans., vol. 26, pp. 715-729, 1889.

Bisat, William Sawney.

1. (and Duncan, C., and Moore, E. W. J.). On the occurrence of a British Coal Measure goniatite in Missouri: *Yorkshire Geol. Soc. Proc.*, new ser., vol. 22, pt. 1, pp. 1-8, 5 figs., 1 pl., November, 1931.

Black, J. K.

1. (and Ambler, J. O.). Measurement of the quantity of water delivered by the Meramec Spring: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1904.

Blair, A. A. Refer also to Chauvenet, R. and Pumpelly, R.

1. Analyses of iron ores and pig-irons: *Missouri Geol. Survey, Preliminary Rept.*, pp. 39-44, New York, 1873.
2. (and R. Chauvenet). Analyses of iron ores, pig irons and fuels: *Iron Ores of Missouri and Michigan*, 320 pp., 1876.

Blake, True W.

1. Bituminous coal mining in northern Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1914.

Bliss, N. W.

1. East-south Missouri. The counties immediately adjoining and contiguous to the great river and the city of St. Louis. Their resources—advantages—soils—climate—products—mineral deposits—water powers, etc.: Published by Union Mining and Smelting Company, Old Mines, Washington County, Missouri, and Washington Land and Mining Company, Kingston Furnace, Washington County, Missouri.

Boardman, D. G.

1. Sheet-ground mine in southwest Missouri: *Eng. and Min. Jour.*, vol. 84, no. 19, pp. 877-880, November 9, 1907.

Boardman, Leona. Refer to Mansfield, G. R.

Bodman, J. W.

1. Some geology on the Weingarten quadrangle, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1910.

Bolon, Harry Cloyd.

1. A study of Missouri springs: Univ. of Missouri, School of Mines and Met., unpublished thesis, 77 pp., il., photos, tables, graphs, Rolla, Missouri, 1935.

Bomford, George.

1. Lead mines in Missouri: Communicated to the Senate, May 7, 1822, 1st session, 17th Congress, no. 364, vol. 3, pp. 492-496, 1822.

Born, Kendall E.

1. (and Greger, D. K.). Stratigraphy and fauna of the Fernvale formation: *Missouri Acad. Sci. Proc.*, vol. 1, p. 120, 1935; *Washington Univ. Studies, Contributions in Geology, new ser.*, no. 9, pp. 67-77, 1936.

Bourne, A.

1. Prairies and barrens of the West: *Am. Jour. Sci.*, 1st ser., vol. 2, pp. 30-35, 1820.

Bowles, J. H.

1. (and Davidson, L. E.). Copper deposits of Shannon County, Missouri: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1921.
2. (and Davidson, L. E., and Netzeband, W. F.). Investigation to determine a possible source of the Carboniferous sandstone of the Ozark region: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1921.

Boyd, W. W.

1. The Joplin mining district (Missouri-Arkansas): *Canadian Min. Inst. Trans.*, vol. 15, pp. 617-630, 1912.

Brackenridge, H. M.

1. Views of Louisiana (including what is now known as Missouri), together with journal of voyage up Missouri River in 1817: one volume, 304 pp., Pittsburgh, 1814.

Bradbury, J.

1. Travels in interior of America, in the years 1809, 1810, and 1811 (pp. 199-200 refer to Missouri): one vol., Liverpool.

Bradford, —.

1. Notes on the Northwest, or valley of the upper Missouri, comprising ... northern Illinois and Missouri: pp. 200-270, 12 figs., New York and London, 1846.

Bradford, Donald Connick.

1. (and Dahm, C. G.). The Rodney, Missouri, earthquake of August 20, 1934: *Seismol. Soc. America Bull.*, vol. 25, no. 2, pp. 154-160, 2 figs. incl. sketch map, April, 1935.
2. (and Macelwane, J. B.). A preliminary sketch of the seismic history of Missouri (abstract): *Earthquake Notes*, vol. 7, nos. 1-2, p. 17 (mimeographed), September, 1935.
3. The relation between changing meteorological conditions and microseisms recorded at St. Louis University (abstract): *Earthquake Notes*, vol. 7, nos. 1-2, p. 9 (mimeographed), September, 1935.

Bradley, John Hodgdon, Jr.

1. Stratigraphy of the Kimmswick limestone of Missouri and Illinois: *Jour. Geology*, vol. 33, no. 1, pp. 49-74, January-February, 1925; (abstract), *Chicago Univ., Abstracts of Theses*, vol. 3, pp. 217-220, April, 1927.

2. Fauna of the Kimmswick limestone of Missouri and Illinois: Chicago Univ., Walker Mus. Contr., vol. 2, no. 6, pp. 219-290, 8 pls., June, 1930.

Bradley, R. S.

1. (and Miller, B. K., Read, O. H., and Keller, W. D.). The pit and plant of the A. P. Green Fire Brick Company (Mexico, Missouri): Kansas Geol. Soc. Guidebook, 15th Ann. Field Conf., pp. 95-98, 2 figs., 1941.
2. (and Miller, B. K.). Prospecting, developing and mining semi-plastic fire clay in Missouri: Am. Inst. Min. and Met. Eng. Tech. Pub. 1328, 9 pp., 15 figs., May-July 1941.

Branner, J. C.

1. Preface to "The geology of Crowley's ridge": Arkansas Geol. Survey, Ann. Rept. 1889, vol. 2, pp. 9-19, 1891.
2. The zinc and lead region of northern Arkansas: Annual Report of the Geological Survey of Arkansas for 1892, vol. 5, pp. 1-265, 1900.

Branson, Edwin Bayer.

1. The fauna of the residuary Auburn chert of Lincoln County, Missouri: St. Louis Acad. Sci. Trans., vol. 18, pp. 39-52, il., 1909.
2. A Mississippian delta (with discussion by Clarke, J. M., White, D., Stose, G. W., Keith, A., Wherry, E. T., and Kummel, H. B., on pp. 744-746): Geol. Soc. America Bull., vol. 23, pp. 447-456, 1912; abstract, Science, new ser., vol. 35, p. 317, 1912.
3. Devonian fishes of Missouri (abstract): Geol. Soc. America Bull., vol. 24, p. 119, 1913.
4. A four mile section along the Missouri River south of Columbia, Missouri (abstract): Science, new ser., vol. 37, p. 459, 1913.
5. The Devonian fishes of Missouri: Missouri Univ. Bull. 15, Science 2d ser., pp. 59-74, figs., 1914.
6. (and Greger, D. K.). Devonian of central Missouri (abstract): Geol. Soc. America Bull., vol. 26, p. 112, 1915.
7. Remarkable geologic section near Columbia, Missouri (abstract): Geol. Soc. America Bull., vol. 28, p. 170, 1917.
8. Geology of Missouri: Univ. of Missouri Bull. 19, no. 15, 172 pp., figs., 1918.
9. Notes on the stratigraphy and faunas of the lower Kinderhookian in Missouri (abstract): Geol. Soc. America Bull., vol. 29, p. 93, 1918.
10. A geologic section from 40 miles west of St. Louis to Jackson County, Missouri: Am. Jour. Sci., 4th ser., vol. 49, pp. 267-278, 1 fig., April, 1920.
11. Devonian of Missouri (abstract): Geol. Soc. America Bull., vol. 32, no. 1, p. 35, March 31, 1921.
12. (and Williams, J. S.; Stewart, G. A.; and Tansey, V. O.). The Devonian of Missouri (includes bibliography): Missouri Bur. Geology and Mines, 2d ser., vol. 17, 279 pp., 71 pls., map, 1923.
13. (and Williams, J. S.). Fauna of the middle Devonian of southeast Missouri: Missouri Bur. Geol. and Mines, 2d ser., vol. 17, pp. 130-165, pls., 1923.

14. (and Williams, J. S.). Evolution of *Stropheodonta demissa* (Conrad) in the Snyder Creek shales of Missouri (abstract): Geol. Soc. America Bull., vol. 34, no. 1, pp. 134-135, March 30, 1923.
15. Paleozoic formation margins in Missouri: Am. Jour. Sci., 5th ser., vol. 8, pp. 317-322, 1 fig., October, 1924.
16. (and Williams, J. S.). Relationship of upper Devonian and lower Mississippian faunas of Missouri (abstract): Geol. Soc. America Bull., vol. 36, no. 1, pp. 216-217, March 30, 1925.
17. Mississippian series of Missouri (abstract): Pan-Am. Geologist, vol. 45, no. 2, p. 174, March, 1926.
18. Devonian of Missouri, Illinois, and Iowa (abstract): Geol. Soc. America Bull., vol. 38, no. 1, p. 226, March 30, 1927; Pan-Am. Geologist, vol. 47, no. 3, p. 237, April, 1927.
19. Stratigraphy and paleontology of the Kinderhookian of Missouri (abstract): Geol. Soc. America Bull., vol. 40, no. 1, p. 131, March 30, 1929; Pan-Am. Geologist, vol. 51, no. 2, p. 154, March, 1929.
20. New localities for Devonian fishes (abstract) (Columbia, Missouri area is mentioned): Geol. Soc. America Bull., vol. 40, no. 1, p. 245, March 30, 1929.
21. Productidae of the basal Mississippian in Missouri (abstract): Pan-Am. Geologist, vol. 53, no. 2, p. 134, March, 1930; Geol. Soc. America Bull., vol. 41, no. 1, p. 121, March 31, 1930.
22. (and Mehl, M. G.). Silurian conodont fauna (abstract): Geol. Soc. America Bull., vol. 43, no. 1, pp. 286-287, March, 1932.
23. (and Mehl, M. G.). New conodont assemblages and their use in stratigraphy (abstracts): Geol. Soc. America Bull., vol. 43, no. 1, p. 283, March, 1932; Pan-Am. Geologist, vol. 57, no. 2, p. 159, March, 1932.
24. (and Mehl, M. G.). Footprints records from the Paleozoic and Mesozoic of Missouri, Kansas, and Wyoming: Geol. Soc. America Bull., vol. 43, no. 2, pp. 383-398, 4 figs., 1 pl., June 30, 1932; abstracts, Geol. Soc. America Bull., vol. 43, no. 1, pp. 284-285, March, 1932; Pan-Am. Geologist, vol. 57, no. 2, p. 160, March, 1932.
25. (and Mehl, M. G.). Conodont studies no. 1; conodonts from Harding sandstone of Colorado; from the Bainbridge (Silurian) of Missouri; from the Jefferson City (lower Ordovician) of Missouri: Univ. of Missouri Studies, vol. 8, no. 1, pp. 1-72, 1 fig., 4 pls., January 1, 1933.
26. (and Mehl, M. G.). Conodont studies no. 2; Conodonts from Joachim (middle Ordovician) of Missouri; from the Plattin (middle Ordovician) of Missouri; from the Maquoketa-Thebes (upper Ordovician) of Missouri; a study of Hinde's types of conodonts preserved in the British Museum: Univ. of Missouri studies, vol. 8, no. 2, pp. 77-167, 7 pls., April 1, 1933.
27. (and Mehl, M. G.). Conodont studies no. 3; Conodonts from the Grassy Creek shale of Missouri: Univ. of Missouri Studies, vol. 8, no. 3, pp. 171-259, 3 figs., (incl. map), 9 pls., July 1, 1933.
28. (and Mehl, M. G.). Conodont studies no. 4; Conodonts from the Bushberg sandstone and equivalent formations of Missouri: Univ. of Missouri Studies, vol. 8, no. 4, pp. 265-300, 3 pls., October 1, 1933.

29. (and Tarr, W. A.). Introduction to geology, 470 pp., 456 figs., New York, McGraw-Hill Book Co., Inc., 1935.
30. Kinderhookian of Missouri (abstract): Geol. Soc. America Proc. 1933, p. 352, June, 1934.
31. (and Mehl, M. G.). Notes on the ecology of the conodonts (abstract): Geol. Soc. America Proc. 1933, p. 362, June, 1934.
32. (and Mehl, M. G.). Value of conodonts in stratigraphic determinations (abstract): Geol. Soc. America Proc. 1934, p. 375, June, 1935.
33. (and Mehl, M. G.). Methods, problems, and results of conodont studies (abstract): Geol. Soc. America Proc. 1934, p. 441, June, 1935.
34. (and Mehl, M. G.). Geological affinities and taxonomy of conodonts (abstract): Pan-Am. Geologist, vol. 65, no. 3, p. 233, April, 1936; Geol. Soc. America Proc. 1935, p. 436, June, 1936.
35. (and Mehl, M. G.). The conodont genus *Icriodus* and its stratigraphic distribution: Jour. Paleontology vol. 12, no. 2, pp. 156-166, 1 pl., 1 fig., March, 1938; abstracts, Pan-Am. Geologist, vol. 65, no. 3, pp. 233-234, April, 1936; Geol. Soc. America Proc. 1935, p. 436, June, 1936.
36. The lower Mississippian in the Mississippi Valley (abstract): Tulsa Geol. Soc. Digest 1938, p. 15.
37. (and Mehl, M. G.). Conodont assemblages (abstract); Geol. Soc. America Proc. 1937, p. 270, June, 1938.
38. Stratigraphy and paleontology of the lower Mississippian of Missouri, pt. 1: Univ. of Missouri Studies, vol. 13, no. 3, 205 pp. 23 pls., 6 figs. incl. index map, July 1, 1938.
39. Stratigraphy and paleontology of the lower Mississippian of Missouri; Stratigraphy and paleontology of the Northview and Hannibal: Univ. of Missouri Studies, vol. 13, no. 4, pp. 3-56, 8 pls., 2 figs. incl. geol. sketch map, October 1, 1938.
40. (and Mehl, M. G.). Pisces from the lower Mississippian of Missouri, in Stratigraphy and paleontology of the lower Mississippian of Missouri, pt. 2: Univ. of Missouri Studies, vol. 13, no. 4, pp. 109-127, 3 pls., October 1, 1938.
41. (and Mehl, M. G.). Conodonts from the lower Mississippian of Missouri, in Stratigraphy and paleontology of the lower Mississippian of Missouri, pt. 2: Univ. of Missouri Studies, vol. 13, no. 4, pp. 128-148, 2 pls., October 1, 1938.
42. Summary, comments, and lists of species, in Stratigraphy and paleontology of the lower Mississippian of Missouri, pt. 2: Univ. of Missouri Studies, vol. 13, no. 4, pp. 179-189, October 1, 1938.
43. (and Mehl, M. G.). Late Mississippian and early Pennsylvanian conodonts (Missouri and Wyoming) (abstract): Missouri Acad. Sci. Proc. 1938, vol. 4, no. 6, p. 167, March 15, 1939.
44. (and Mehl, M. G.). The Mississippian-Devonian contact in Missouri (abstract): Missouri Acad. Sci. Proc. vol. 4, no. 6, p. 167, March, 1939.
45. (and Mehl, M. G.). New Ordovician conodont faunas: Geol. Soc. America Bull., vol. 51, no. 12, pt. 2, p. 1968, December, 1940.

46. (and Mehl, M. G.). Conodonts from the Keokuk formation: *Dennison Univ. Bull.*, vol. 40, no. 14, pp. 179-188, 1 pl., December, 1940.
- 46A. The recognition and interpretation of mixed conodont faunas: *Dennison Univ. Bull.*, vol. 35, pp. 197-209, 1941.
47. Devonian of central and northeastern Missouri: *Kansas Geol. Soc. Guidebook*, 15th Ann. Field Conf., pp. 81-85, 1 fig., geol. map, 1941.
48. (and Mehl, M. G.). New and little known Carboniferous conodont genera: *Jour. Paleontology*, vol. 15, no. 2, pp. 97-106, 1 pl., March, 1941.
49. (and Mehl, M. G.). Devonian fishes from Missouri (abstract): *Geol. Soc. America Bull.*, vol. 53, no. 12, pt. 2, p. 1841, December 1, 1942.
50. Dinosaur from the Cretaceous of Missouri (abstract): *Geol. Soc. America Bull.*, vol. 53, no. 12, pt. 2, p. 1841, December 1, 1942.
51. Devonian of northeastern Missouri; Symposium on Devonian stratigraphy: *Illinois State Geol. Survey Bull.*, no. 68, pp. 174-181, 4 figs., 1944.
52. The geology of Missouri: *Univ. of Missouri Studies*, vol. 19, no. 3, 535 pp., 51 figs., 49 pls., 1944.

Branson, Edwin Robert.

1. Conodonts from the Hannibal formation of Missouri: *Univ. of Missouri Studies*, vol. 8, pt. 2, pp. 301-335, 1934.

Bratton, S. T.

1. Some geographical influences in the development of type railroads in Missouri: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1917.

Breckenridge, L. P.

1. Boiler tests of Missouri coal: *U. S. Geol. Survey Bull.* 261, pp. 81-82, 1905.
2. Boiler tests of Missouri coal: *U. S. Geol. Survey Prof. Paper* 48, pt. 2, pp. 681-744, 1906.
3. A study of four hundred steaming tests, made at the fuel testing plant, St. Louis, Missouri in 1904, 1905, and 1906 (gives results derived from certain Missouri coals): *U. S. Geol. Survey Bull.* 325, 196 pp., 1907.
4. Steaming tests of Missouri coal: *U. S. Geol. Survey Bull.* 332, pp. 167, 170, 171, 173, 1908.

Bretz, J. Harlan.

1. Vadose and phreatic features of limestone caverns (Refers to many Missouri caves, particularly Mark Twain Cave at Hannibal.): *Jour. Geology*, vol. 50, pp. 675-811, 1942.

Bridge, Josiah. Refer also to Dake, C. L., and Ulrich, E. O.

1. (and Ingerson, M. J.). Middle Ordovician section in east central Missouri: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, no date.

2. A study of the faunas of the residual Mississippian of Phelps Co., Missouri: *Jour. Geology*, vol. 25, pp. 558-575, 1917.
3. (and Charles, B. E.). A Devonian outlier near the crest of the Ozark uplift: *Jour. Geology*, vol. 30, no. 6, pp. 450-458, 3 figs., September-October, 1922.
4. Ebb and flow springs in the Ozarks: *Univ. of Missouri, School of Mines and Met. Bull.*, vol. 7, no. 1, pp. 17-26, 6 figs., 3 pls., November, 1923.
5. (and Dake, C. L.). Initial dips peripheral to resurrected hills: *Missouri Bur. Geol. and Mines, 55th Bienn. Rept. State Geologist*, 1927-28, app. 1, pp. 93-99, 1 pl., 1929.
6. Geology of the Eminence and Cardareva quadrangles: *Missouri Bur. Geology and Mines, 2d ser.*, vol. 24, 228 pp., 10 figs., 2 tables, 22 pls., maps, 1930.
7. Copper in Missouri, Copper resources of the world: 16th International Geological Congress, 1935, pp. 285-286, Washington, 1935.
8. Charles Laurence Dake (1883-1934): *Am. Assoc. Petroleum Geologists Bull.*, vol. 19, no. 1, pp. 143-147, portr., January, 1935.
9. Correlation of the upper Cambrian sections of Missouri and Texas with the section in the upper Mississippi Valley: *U. S. Geol. Survey Prof. Paper 186-L*, pp. ii 233-237, 1937; abstract, *Geol. Soc. America Proc.* 1935, p. 387, June, 1936.
10. (and Cooper, G. A.). Collecting fossils in Utah, Nevada, Texas, and the Midwest: *Smithsonian Inst. Exp. and Field Work in 1939*, Publication No. 3586, pp. 9-16, 10 figs., April, 1940.

Brightman, George F.

1. The Tom Sauk limestone of southeastern Missouri (abstract): *Missouri Acad. Sci. Proc.*, vol. 3, no. 4, p. 120, 1937.

Bringier, L.

1. Notice of geology, mineralogy, topography, productions, and aboriginal inhabitants of the regions around the Mississippi and its confluent waters: *Am. Jour. Sci.*, 1st ser., vol. 3, pp. 15-47, 1821.

Brittain, Doss.

1. Calamine mining in the Missouri-Kansas district: *The Lead and Zinc News*, vol. 9, no. 7, pp. 11, 12, Joplin, Missouri, December 4, 1905.
- 1A. Ground breaking in the Joplin District: *Eng. and Min. Jour.*, vol. 84, no. 6, pp. 255-259, August 10, 1907.
- 1B. History of smelting in the Joplin District: *Eng. and Min. Jour.*, vol. 84, no. 19, pp. 861-866, November 9, 1907.
2. The new sheet ground of the Joplin district: *Mining World*, Chicago, vol. 27, pp. 841-844, 1907.
3. The minerals of Joplin and their association: *Mining World*, Chicago, vol. 28, pp. 289-291, 1908.

Broadhead, Garland Carr.

1. Report on copper prospects: *Geol. Rept. on Southwestern Branch, Pacific Railroad*, pp. 66-68, St. Louis, 1859.

2. The caves of Missouri: The Missouri Republican, November, 1863.
3. Coal Measures in Missouri: St. Louis Acad. Sci. Trans., vol. 2, no. 2, pp. 311-333, 1866.
4. Mineral Springs of Missouri: Missouri State Board of Agriculture, 2d. Ann. Rept., 1866.
5. Paints and clays (of Missouri): Missouri State Board of Agriculture, 3d Ann. Rept., 1867, pp. 200-201, 1868.
- 5A. Coal measures in Missouri: St. Louis Acad. Sci. Trans., vol. 2, p. 320, 1868.
6. Caves in Missouri: Missouri State Board of Agriculture, 3d Ann. Rept., 1867, pp. 201-204, 1868.
7. Fossil horse in Missouri: Am. Naturalist, vol. 4, p. 60, 1869.
8. Note on Coal Measure fucoids: Am. Jour. Sci., 3d. ser., vol. 2, pp. 216-217, 1871.
9. Quaternary deposits: Am. Naturalist, vol. 4, p. 61, 1871.
10. Bones of large mammals in drift: St. Louis Acad. Sci. Trans., vol. 3, p. 23, November 15, 1869, 1873.
11. Fossil horse in Missouri: St. Louis Acad. Sci. Trans., vol. 3, pp. 20-21, October 4, 1869, 1873.
12. Mineralogy of Cole County (Missouri): St. Louis Acad. Sci. Trans., vol. 3, pp. 23-24, November, 1870, 1873.
13. Maries County, Missouri (geology of): Missouri Geol. Survey, Rept. of 1855-1871, pp. 1-23, 1873.
14. Osage County, Missouri (geology of): Missouri Geol. Survey, Rept. of 1855-1871, pp. 25-36, 1873.
15. Warren County, Missouri, (geology of): Missouri Geol. Survey, Rept. of 1855-1871, pp. 37-64, 1873.
16. Shelby County, Missouri (geology of): Missouri Geol. Survey, Rept. of 1855-1871, pp. 65-73, 1873.
17. Macon County, Missouri (geology of): Missouri Geol. Survey, Rept. of 1855-1871, pp. 74-92, 1873.
18. Randolph County, Missouri (geology of): Missouri Geol. Survey, Rept. of 1855-1871, pp. 93-110, 1873.
19. Area and topographic features of the coal field: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 5-10, geol. map (also published separately), 1873.
20. The lower Coal Measures: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 11-44, 1873.
21. The middle Coal Measures: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 45-87, 1873.
22. The upper Coal Measures: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 88-135, 1873.
23. Economic geology of the Coal Measures: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 135-156, 1873.
24. Geological report on the country adjacent to the Pacific Railroad from Sedalia to Kansas City: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 157-213, 1873.
25. Geology of Livingston County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 290-316, 1873.
26. Geology of Clay County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 317-326, 1873.

27. Geology of Platte County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 327-343, 1873.
28. Geology of Buchanan County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 344-358, 1873.
29. Geology of Holt County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 359-375, 1873.
30. Geology of Atchinson County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 376-387, 1873.
31. Geology of Nodawy County: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 388-402, 1873.
32. Note on such rocks of Missouri as admit of a fine polish: Missouri Geol. Survey, Rept. on Iron Ores and Coal Fields, 1872, pt. 2, pp. 414-415, 1873.
33. Report on the Geological Survey of the State of Missouri, including field work of 1873-1874: Missouri Geol. Survey, 734 pp., 91 pls., incl. 11 maps, 1874.
34. Historical notes on early mining in Missouri: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 11-17, 1874.
35. General geology (of Missouri): Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 18-34, 1874.
36. Caves (of Missouri): Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 35-39, 1874.
37. Soils (of Missouri): Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 40-45, 1874.
38. Minerals (of Missouri): Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 46-56, 1874.
39. Topographical features of the southwest coal field: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 57-61, 1874.
40. Geology of Cedar County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 62-76, 1874.
41. (and Norwood, C. J.). Geology of Jasper County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 77-96, 1874.
42. (and Norwood, C. J.). Geology of Barton County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 97-118, 1874.
43. (and Norwood, C. J.). Geology of Vernon County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 119-154, 1874.
44. Geology of Bates County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 155-178, 1874.
45. (and Norwood, C. J.). Geology of Howard County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 179-221, 1874.
46. Geology of Sullivan County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 222-241, 1874.
47. Geology of Adair County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 242-256, 1874.
48. Geology of Linn County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 257-271, 1874.
49. Geology of Andrew County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 303-311, 1874.
50. Geology of Daviess County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 312-321, 1874.
51. Geology of Cole County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874, pp. 322-341, 1874.

52. (and Norwood, C. J.). *Geology of Madison County: Missouri Geol. Survey, Rept. on Field Work of 1873-1874*, pp. 342-379, 1874.
53. *Mineral springs (of Missouri): Missouri Geol. Survey, Rept. on Field Work of 1873-1874*, pp. 701-704, 1874.
54. *Area and topographic features of southwest coal fields: Mines, Metals and Arts, 1874.*
55. *Review of reports of the Geological Survey of the State of Missouri, 1855-1871, Geol. Magazine, vol. 1, new ser., pp. 368-369, 1874.*
56. *Note on pickeringite from Missouri: Am. Jour. Sci., 3d ser., vol. 7, p. 520, 1874.*
57. *Iron ores of Carboniferous age: Mines, Metals and Arts, vol. 2, no. 25, p. 401, February 25, 1875.*
58. *Mines of Morgan and Benton Counties: Mines, Metals and Arts, vol. 3, no. 21, p. 163, July 29, 1875.*
59. *Mines of Cole County, Missouri: Mines, Metals and Arts, vol. 3, no. 23, p. 179, August 12, 1875.*
60. *Morgan County lead mines: Mines, Metals and Arts, vol. 3, no. 26, p. 202, September 2, 1875.*
61. *The St. Joe Mines, southeast Missouri: Mines, Metals and Arts, vol. 4, no. 7, p. 66, October 21, 1875.*
62. *A visit to southeast Missouri mines: Mines, Metals and Arts, vol. 4, p. 77, October 28, 1875.*
63. *Drift formation and gold in Missouri: Mines, Metals and Arts, vol. 4, no. 4, p. 150, December 9, 1875.*
64. *On the well at the Insane Asylum, St. Louis County, Missouri: Am. Jour. Sci., 3d ser., vol. 9, pp. 61-62, 1875.*
65. *On a discovery of meteoric iron in Missouri (at Butler, Bates Co.): Am. Jour. Sci., 3d ser., vol. 10, p. 401, 1875.*
66. *On the height of the St. Louis directrix (Former barometric reading defended): Am. Jour. Sci., 3d ser., vol. 10, p. 75, 1875.*
67. *The geology of Missouri, in article entitled "Missouri": The Am. Cyclopaedia, pp. 665-666, 1875.*
68. *Occurrence of bitumen in Missouri: St. Louis Acad. Sci. Trans., vol. 3, pp. 224-226, 1875.*
69. *Physical geography of the Mississippi Valley: Mines, Metals and Arts, February, 1876.*
70. *Geographical notes on southeast Missouri, Reynolds County: Mines, Metals and Arts, March, 1876.*
71. *Age of our porphyries: St. Louis Acad. Sci. Trans., vol. 3, no. 3, pp. 366-370, 1876.*
72. *Porphyritic rocks of southeast Missouri Huronian: The Western, new ser., vol. 22, pp. 241, 243 and 248, 1876.*
73. *Drift formation and gold in Missouri: Am. Jour. Sci., 3d ser., vol. 11, p. 150, 1876.*
74. *The southeast Missouri lead district: Am. Inst. Min. Eng. Trans., vol. 5, pp. 100-107, 1877; Eng. and Min. Jour., vol. 22, pp. 59-60, 1876.*
75. *Bituminous shales: Mines, Metal and Arts, February, 1877.*
76. *Coal of southwest Missouri: Mines, Metals and Arts, December, 1877.*

77. On barite crystals from the Last Chance mine, Morgan County, Missouri; and on goethite from Adair County, Missouri: *Am. Jour. Sci.*, 3d ser., vol. 13, pp. 419-420, 1877.
78. Thickness of the Missouri Coal Measures: *Kansas City Rev. Sci.*, vol. 1, no. 7, pp. 392-393, 1877.
79. Bitumen, asphaltum, petroleum, pyroschists and certain other solid hydro-carbons: *Western Rev. Sci.*, vol. 1, pp. 209-224, 1877.
80. Meteor of January 3, 1877 (It fell in Warren Co., Missouri.): *The Western*, new ser., vol. 3, pp. 245-246, 1877.
81. Meteoric stones and shooting stars: *Western Rev. Sci.*, vol. 1, pp. 724-742, 1878.
82. (Erratic) Boulders south of the Missouri (River): *St. Louis Acad. Sci. Trans.*, vol. 3, p. 23, 1878.
83. Missouri iron ores of Carboniferous age: *Kansas City Rev. Sci.*, vol. 1, no. 11, pp. 650-654, 1878.
84. Jackson County, Missouri, a few notes on its geology: *Kansas City Rev. Sci.*, vol. 2, no. 4, pp. 204-210, 1878.
85. Remarks on Hunt's and Dana's sections: *Kansas City Rev. Sci.*, vol. 2, pp. 666-668, 1879.
86. Missouri (geological formations in): *McFarlane's Geol. Railroad Guide*, pp. 154-168, 1879.
87. Origin of the loess: *Am. Jour. Sci.*, 3d ser., vol. 18, p. 427, 1879.
- 87A. The account of the geological formations and localities of Missouri: D. Appleton and Co., New York, 1879.
88. Geologists traveling hand-book and geological railway guide, by James McFarlane (Review): *Kansas City Rev. Sci.*, vol. 2, no. 10, pp. 628-629, 1879.
89. Notes on surface geology of southwest Missouri and southeast Kansas: *Kansas City Rev. Sci.*, vol. 3, no. 8, pp. 460-461, 1879.
90. Geological report on the mineral lands of Major R. H. Melton (Benton and Hickory Counties) (Private publication), pp. 1-12, Sedalia, Missouri, 1880.
91. Missouri (building stones of): *The U. S. Census Rept. for 1880, Rept. on the Building Stones of the United States and Statistics of the Quarry Industry for 1880. Part of vol. 10*, pp. 265-274, 1880.
92. Geology of southern Missouri: *St. Louis Immigration Society, Convention of April*, 1880.
93. A review of "Contributions to Paleontology", nos. 2-8, by White, C. A.: *Kansas City Rev. Sci.*, vol. 4, pp. 448-449, 1880.
94. The Mastodon: *Kansas City Rev. Sci.*, vol. 4, no. 9, pp. 519-530, 1881.
95. The Carboniferous rocks of southeast Kansas: *Am. Jour. Sci.*, 3d ser., vol. 22, pp. 55-57, 1891; (abstract), *Kansas City Rev. Sci.*, vol. 5, no. 5, pp. 273-275, 1881.
- 95A. Geological notes on the central branch, Union Pacific Railroad: *Kansas City Rev. Sci.*, vol. 5, pp. 129-132, 1881.
96. Archaean rocks of Missouri: *Kansas City Rev. Sci.*, vol. 5, no. 12, pp. 735-738, 1882.
97. Marbles of southeast Missouri: *Kansas City Rev. Sci.*, vol. 5, no. 9, pp. 523-526, 1882.
98. Southwest Missouri lead interest: *Eng. and Min. Jour.*, vol. 25, p. 73, 1883.

99. Missouri lead smelters: *Eng. and Min. Jour.*, vol. 25, p. 91, 1883.
100. Missouri minerals: *Eng. and Min. Jour.*, vol. 25, pp. 276-277, 1883.
101. Old Granby mines, Newton County, Missouri: *Eng. and Min. Jour.*, vol. 25, p. 406, 1883.
102. Old maps: *Kansas City Rev. Sci.*, vol. 7, no. 1, pp. 56-58, 1883.
103. Explorers of western America: *Kansas City Rev. Sci.*, vol. 7, no. 6, pp. 407-412, 1883.
104. Notes on Egyptian stone dressing: *Kansas City Rev. Sci.*, vol. 7, no. 7, pp. 430-431, 1883.
105. Geology of Bates County: *History of Cass and Bates Counties, Missouri*, pp. 759-781, National Historical Company, St. Joseph, Missouri, 1883.
106. The relation of the soils of Missouri to geology (Lecture delivered in the University Chapel, March 29, 1884): *Missouri State Univ., Ann. Rept. 1883-1884*, pp. 72-79, 1884; *Missouri State Board of Agri., 17th Ann. Rept.*, 1883, pp. 159-168, 1884.
107. Flint chips: *Kansas City Rev. Sci.*, vol. 7, no. 10, pp. 599-602, 1884.
108. Mines of Carterville, Jasper County, Missouri: *Kansas City Rev. Sci.*, vol. 8, nos. 2-3, pp. 70-77, 1884.
109. Carboniferous rocks of eastern Kansas: *St. Louis Acad. Sci. Trans.*, vol. 4, no. 3, pp. 481-492, 1884.
110. Sketch of geology of Missouri: *Missouri State Board Agri., 18th Ann. Rept.*, pp. 250-259, 1885.
111. Missouri Geological Surveys, Historical Memoir: *St. Louis Acad. Sci. Trans.*, vol. 4, no. 4, pp. 555-568, 1885.
112. The geological history of the Ozark uplift: *Am. Geologist*, vol. 3, pp. 6-13, January, 1889.
113. Missouri, its mineral resources: *U. S. Comm. Statistics, Rept. 1889*, pp. 461-468, 1889.
114. The Missouri River: *Am. Geologist*, vol. 4, pp. 148-155, September, 1889.
115. Missouri (geological formations in): *McFarlane's Geol. Railway Guide*, 2d ed., pp. 267-273, 1890.
116. The Ozark series: *Am. Geologist*, vol. 8, pp. 33-35, 1891.
117. Coal deposits of southwest Missouri: *Inter-State Mining Conv. Proc.*, pp. 66-67, December, 1891.
118. The correct succession of the Ozark series: *Am. Geologist*, vol. 11, pp. 260-268, April, 1893.
119. A critical notice of the stratigraphy of the Missouri Paleozoic: *Am. Geologist*, vol. 12, pp. 74-89, 1893.
120. Production of zinc in Missouri: *Am. Geologist*, vol. 12, p. 274, 1893.
121. The Cambrian and the Ozark series: *Am. Jour. Sci.*, 3d ser., vol. 46, pp. 57-60, July, 1893.
122. Geological history of the Missouri Paleozoic: *Am. Geologist*, vol. 14, pp. 380-388, December, 1894.
123. The Coal Measures of Missouri: *Missouri Geol. Survey*, vol. 8, pp. 353-395, 1895.
124. Biography of Joseph Granville Norwood, M. D., LL.D.: *Am. Geologist*, vol. 16, no. 2, pp. 69-74, portr., August 1895.
125. The Devonian of north Missouri, with notice of a new fossil: *Am. Jour. Sci.*, 4th ser., vol. 2, pp. 237-238, 1896.

126. Geology of Boone County, Missouri: Missouri Geol. Survey, vol. 12, pp. 375-388, 1898.
127. The Ozark uplift and growth of the Missouri Paleozoic: Missouri Geol. Survey, vol. 12, pp. 391-409, 1898.
128. Major Frederick Hawn (biography): Am. Geologist, vol. 21, pp. 267-269, May, 1898.
129. Biographical sketch of George Clinton Swallow: Am. Geologist, vol. 24, pp. 1-6, July, 1899.
130. Geological surveys (of Missouri): Encyclopedia of the History of Missouri, vol. 3, pp. 27-31, New York, 1901.
131. Mineralogy (of Missouri): Encyclopedia History of Missouri, vol. 4, pp. 390-393, New York, 1901.
132. The New Madrid earthquake: Am. Geologist, vol. 30, pp. 76-87, August, 1902.
133. Obituary notice of A. A. Blair: Am. Geologist, vol. 30, pp. 398-399, 1902.
134. Abram Litton, M. D. (biography): St. Louis Acad. Sci. Trans., vol. 12, pp. 24-27, 1903.
135. Bituminous and asphalt rocks of the United States. Am. Geologist, vol. 32, pp. 59-60, July, 1903.
136. Bitumen and oil rocks: Am. Geologist, vol. 33, pp. 27-35, January, 1904.
137. The loess: Am. Geologist, vol. 33, pp. 393-394, June, 1904.
138. Surface deposits of western Missouri and Kansas: Am. Geologist, vol. 34, pp. 66-67, July, 1904.
139. The Saccharoidal sandstone: Am. Geologist, vol. 34, pp. 105-110, August, 1904.
140. Edwin Harrison (biography): St. Louis Acad. Sci. Trans., vol. 15., pp. 35-37, 1905.
141. Cone in cone: Science, new ser., vol. 26, p. 597, 1907.
142. The pinnacles: Missouri Historical Rev., vol. 4, no. 3, pp. 202-203, 1910.

Brockett, —.

1. Our western empire; or the new west beyond the Mississippi (Chapter 12, pp. 927-955 has an account of Missouri, including its geology.): 1312 pp., il., maps, Philadelphia, Pennsylvania, 1882.

Brodie, Walter M.

1. Curious coal deposits in Missouri: Coal Age, vol. 16, pp. 876-881, 20 figs., December 11 and 18, 1919.

Brooks, Marshall, Refer to Robertson, P.

Bruce, James L.

1. Ore dressing in the Joplin District: Eng. and Min. Jour., vol. 93, pp. 404-409, 459-463, 501-504, 553-555, 1912.

Brunner, George J.

1. Recent theories concerning the dynamic causes of earthquakes: Missouri Acad. Sci. Proc., vol. 4, pp. 171-173, 1939.

Brush, B. F.

1. The coal fields of Missouri: *Am. Inst. Min. Eng. Bi-monthly Bull.* 1, pp. 903-917, map, 1905.

Bryan, Joseph Jefferson. Refer also to Tarr, W. A.

1. The lead belt of southeastern Missouri: *Compass*, vol. 11, no. 4, pp. 135-137, May, 1931.
2. Hydrothermal alteration of granite in Wayne County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1931.

Bryant, F. C.

1. Barytes industry of Cole County, Missouri: *Eng. and Min. Jour.*, vol. 45, no. 6, p. 317, February 8, 1913.

Bryson, H. J.

1. (and others). The South's materials for the country's defense: *Manufacturers Rec.*, vol. 109, no. 6, pp. 28-35, 52, 54, June 1940; vol. 109, no. 10, 246 pp., September, 1940.

Buckley, Ernest Robertson.

1. Biennial report of the State Geologist to the 42d General Assembly, 1901-02: *Missouri Bur. Geol. and Mines*, 83 pp., map, 1903.
2. Geology of Miller County (introduction): *Missouri Bur. Geol. and Mines*, 2d ser., vol. 1, 1903.
3. Geological report on the examination of lands in the vicinity of Kingston (Missouri): *Missouri Bur. Geol. and Mines*, Bienn. Rept. of the State Geologist to the 42d General Assembly, 1901-02, pp. 34-36, 1903.
4. Geological report on an examination of lands in the vicinity of Cameron (Missouri): *Missouri Bur. Geol. and Mines*, Bienn. Rept. of State Geologist to the 42d General Assembly, 1901-02, pp. 40-44, 1903.
5. (and Buehler, Henry A.). The quarrying industry of Missouri: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 2, 59 pls., 1904.
6. System of keeping the records of a Geological Survey (abstract): *Science*, new ser., vol. 19, p. 527, 1904.
7. (and Ball, S. H., and Smith, A. F.). Glacial boulders along the Osage River in Missouri (abstract): *Jour. Geology*, vol. 11, pp. 106-107, 1903; *Geol. Soc. America Bull.*, vol. 14, p. 553, 1904.
8. Biennial report of the State Geologist to the 43d General Assembly, 1903-04: *Missouri Bur. Geol. and Mines*, 56 pp., 1905.
- 8A. Geological map of Missouri, scale: 18 miles to 1 inch: *Missouri Bur. Geol. and Mines*, 1904.
9. Geology of Moniteau County (introduction): *Missouri Bur. Geol. and Mines*, 2d ser., vol. 3, 1905.
10. Examination of lands near Bucklin (Missouri): *Missouri Bur. Geol. and Mines*, Bienn. Rept. of State Geologist to 43d General Assembly, p. 21, 1905.
11. (and Buehler, Henry A.). Geology of the Granby area: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 4, 120 pp., 3 figs., 42 plates including geological maps, 1906.

12. Biennial report of the State Geologist to the 44th General Assembly, 1905-06: Missouri Bur. Geol. and Mines, 57 pp., 1907.
- 12A. Geological map of Missouri, scale: 12 miles to 1 inch: Missouri Bur. Geol. and Mines, 1907.
13. Public roads, their improvement and maintenance: Missouri Bur. Geol. and Mines, 2d ser., vol. 5, 124 pp., 1907.
14. Geology of Morgan County (introduction): Missouri Bur. Geol. and Mines, 2d ser., vol. 7, 1907.
15. Geology of Pike County (introduction): Missouri Bur. Geol. and Mines, 2d ser., vol. 8, 1907.
16. Genesis of the lead and zinc ores of the Mississippi Valley: Econ. Geology, vol. 2, p. 427, 1907.
17. Review of the Joplin folio, by Smith, W. S. T., and Siebenthal, C. S.: Econ. Geology, vol. 2, p. 518, 1907.
18. Review of the zinc and lead deposits of the upper Mississippi Valley, by Bain, H. F.: Econ. Geology, vol. 2, p. 617, 1907.
19. The geology of the Granby area: Econ. Geology, vol. 2, pp. 311-314, 1907.
20. Lead and zinc resources of Missouri: Am. Min. Cong. Proc., 10th Ann. Sess., Rept. Proc., pp. 282-297, 1908.
21. Sleet storm in the Ozark region: Wisconsin Acad. Sciences, Arts, and Letters, vol. 16, pt. 1, p. 307, 1908.
22. Geology of the disseminated lead deposits of St. Francois and Washington Counties: Missouri Bur. Geol. and Mines, 2d ser., vol. 9, 2 pts., 259 pp., 1909.
23. Lead and zinc mining in the Central States in 1907: Econ. Geology, vol. 4, pp. 175-177, 1909.
24. Discussion of Ozark lead and zinc deposits, their genesis, localization, and migration by Keyes, C. R.: Am. Inst. Min. Eng. Bull., vol. 34, pp. 949-954, 1909; Trans., vol. 40, pp. 856-861, 1910.
25. Discussion of review of paper on the disseminated lead deposits of Missouri by Ransome, F. L.: Econ. Geology, vol. 5, pp. 192-194, 1910.
26. Lead and zinc deposits of the Ozark region: Types of ore deposits (ed. by Bain, H. F.), pp. 103-132, 1911.

Bucklin, J. M.

1. Report of the engineer on the preliminary surveys and location of the Hannibal and St. Joseph R. R. (This has a section of seventy miles of the north Missouri coal field.): Western Jour. and Civilian, vol. 10, pp. 272-277, 1853.

Buehler, Henry Andrew. Refer also to Buckley, E. R. and Wright, C. A.

1. The lime and cement resources of Missouri: Missouri Bur. Geol. and Mines, 2d ser., vol. 6, 255 pp., 1907.
2. Biennial report of the State Geologist to the 45th General Assembly, 1907-08: Missouri Bur. Geol. and Mines, 59 pp., 1909.
3. (and Gottschalk, V. H.). Oxidation of sulphides: Econ. Geology, vol. 5, pp. 28-35, 1910.
4. Biennial report of the State Geologist to the 46th General Assembly, 1909-10: Missouri Bur. Geol. and Mines, 68 pp., 6 pls., 1911.
5. (and Gottschalk, V. H.). Oxidation of sulphides, 2d paper: Econ. Geology, vol. 7, pp. 15-34, 1912.

- 5A. Geological map of Missouri, scale: 1:750,000: Missouri Bur. Geol. and Mines, 1912.
6. Memoir of Ernest Robertson Buckley: Geol. Soc. America Bull., vol. 24, pp. 44-48, 1913.
7. Biennial report of the State Geologist to the 47th General Assembly, 1911-12: Missouri Bur. Geol. and Mines, 54 pp., 3 pls., 1913.
8. Biennial report of the State Geologist to the 48th General Assembly, 1913-14: Missouri Bur. Geol. and Mines, 62 pp., 4 pls., 1915.
9. Geology and mineral deposits of the Ozark regions: Am. Inst. Min. Met. Eng. Bull., vol. 130, pp. 1699-1718, 1917.
10. Biennial report of the State Geologist to the 49th General Assembly, 1915-16: Missouri Bur. Geol. and Mines, 75 pp., 1 pl., 1917.
11. The characteristics of zinc deposits of North America: Am. Inst. Min. Met. Eng. Bull., vol. 133, pp. 62-63, 1918.
12. Geology and mineral deposits of the Ozark region: Am. Inst. Min. Met. Eng. Trans., vol. 58, pp. 389-408, 1918.
13. Mineral resources of Missouri (includes data of 1916): Missouri Bur. Geol. and Mines, 34 pp., 1918.
14. Biennial report of the State Geologists to the 50th General Assembly, 1917-18: Missouri Bur. Geol. and Mines, 117 pp., 4 pls., 1919.
15. Biennial report of the State Geologist to the 51st General Assembly, 1919-20: Missouri Bur. Geol. and Mines, 87 pp., 4 pls., 1921.
16. Geological map of Missouri, scale: 1:500,000: Missouri Bur. Geol. and Mines, 1922.
17. Biennial report of the State Geologist to the 52d General Assembly, 1921-22: Missouri Bur. Geol. and Mines, 133 pp., 5 pls., 1 map, 1923.
- 17A. Application of geology to quarrying: Rock Products, pp. 111-112, March 8, 1924.
18. Mineral resources of Missouri: The South's Development, Manufacturers Record, vol. 86, no. 24, pt. 2, pp. 393-396, 6 figs., December, 1924.
19. Missouri Bur. of Geology and Mines: Pan-Am. Geologist, vol. 44, no. 4, pp. 323-325, November, 1925.
20. Biennial report of the State Geologist to the 53d General Assembly, 1923-24: Missouri Bur. Geol. and Mines, 143 pp., 4 pls., 1925.
- 20A. Geological map of Missouri, scale: 1:500,000: Missouri Bur. Geology and Mines, 1926.
21. Recent activities of Missouri Bureau of Geology and Mines: Pan-Am. Geologist, vol. 48, no. 1, pp. 77-80, August, 1927.
22. Biennial report of the State Geologist to the 54th General Assembly, 1925-26: Missouri Bur. Geol. and Mines, 108 pp., 3 pls., 3 apps., 1927.
23. Biennial report of the State Geologist to the 55th General Assembly, 1927-28: Missouri Bur. Geol. and Mines, 112 pp., 6 pls., 3 apps., 1929.
24. Biennial report of the State Geologist to the 56th General Assembly, 1929-30: Missouri Bur. Geol. and Mines, 151 pp., 20 pls., 1931.
25. (and McQueen, Henry Silliman). Magnetometer results and siliceous residues in Missouri (abstract): Tulsa Geol. Soc., Summ. and Abstracts 1932, Tulsa Daily World, May 2, 1932.

- 25A. The disseminated-lead district of southeastern Missouri: International Geol. Congress, 16th session, Guidebook 2, pp. 45-55, 2 maps, Washington, 1932.
26. (and Monroe, C. J.). Laboratory formation of minerals: Bienn. Rept. of State Geologist to the 57th General Assembly, 1931-32: Missouri Bur. Geology and Mines, app. 5, 4 pp., 1 plate, 1933.
27. Biennial report of the State Geologist to the 57th General Assembly, 1931-32: Missouri Bur. Geol. and Mines, 50 pp., 3 pls., 5 apps., 1933.
28. Edward Martin Shepard, 1854-1934 (Memorial): Am. Assoc. Petroleum Geologist Bull., vol. 19, no. 1, p. 142, January, 1935.
29. Memorial of Edward Martin Shepard (1854-1934): Geol. Soc. America Proc. 1934, pp. 277-280, portr., June, 1935.
30. Biennial report of the State Geologist to the 58th General Assembly, 1933-34: Missouri Geol. Survey and Water Resources, 56 pp., 1 pl., 1 fig., 7 apps., 1935.
31. Biennial report of the State Geologist to the 59th General Assembly, 1935-36: Missouri Geol. Survey and Water Resources, 53 pp., 8 apps., 1937.
32. Biennial report of the State Geologist to the 60th General Assembly, 1937-38: Missouri Geol. Survey and Water Resources, 61 pp., 1 app., 1939.
33. "Filled sink" or "cave" deposits in the Ozark region: Kansas Geol. Soc. Guidebook, 13 Ann. field conf., pp. 138-140, (planographed), 1939.
34. Geological Map of Missouri, scale: 1:500,000: Missouri Geological Survey and Water Resources, 1939.
35. Biennial report of the State Geologist to the 61st General Assembly, 1939-40: Missouri Geol. Survey and Water Resources, 75 pp., 1 app., 1941.
- 35A. Magnetic map of southeastern Missouri embayment area, scale 4 miles to 1 inch, showing anomalies of vertical intensity at 50 gamma intervals: Missouri Geological Survey and Water Resources, 1941.
36. Biennial report of the State Geologist to the 62d General Assembly, 1941-42: Missouri Geological Survey and Water Resources, 80 pp., 6 apps., 1943.
37. Geologic map of Joplin district based on township maps, scale: 1:15,840, contour interval 10 feet, showing geology, mining and mineralized areas (6 sheets): Missouri Geological Survey and Water Resources, 1941.
38. Magnetic map of Missouri, scale: 1:500,000, showing magnetic anomalies on 100 gamma intervals, overprint on Missouri base map: Missouri Geological Survey and Water Resources, 1943.
39. Gravimetric-map of Missouri, scale: 1:500,000, showing gravimetric anomalies on 50 gravity unit intervals, overprint on Missouri base map: Missouri Geological Survey and Water Resources, 1943.

Buffum, J. G.

1. Correlation of well cuttings by insoluble residues: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1931.

Bumgardner, L. S.

1. The geology of an area near Hannibal, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1928.

Burchard, Ernest Francis.

1. Glass sand of the middle Mississippian basin: U. S. Geol. Survey Bull. 285, pp. 459-472, 1906.
2. Notes on various glass sands, mainly undeveloped: U. S. Geol. Survey Bull. 315, pp. 377-382, 1907.

Burgess, Charles W.

1. Mining costs in the Missouri-Kansas District: Min. and Eng. World, vol. 38, no. 17, pp. 801-805, April 26, 1913.

Burkhart, Edgar C. M.

1. Mine surveying in the Missouri coal fields: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1921.

Burma, Benjamin H.

1. Missouri *Triticitis* of the northern Mid-Continent: Jour. Paleontology, vol. 16, pp. 739-755, 1942.

Burril, Alfred Cummins.

1. Missouri's natural resources: Missouri Resources Museum Mimeograph Bull., no. 2.
2. Missouri cave remains: Missouri Resources Museum Mimeograph Bull., no. 3.
3. Primitive man: Missouri Resources Museum Mimeograph Bull., no. 4.
4. Missouri caves yield up their secrets: Missouri Resources Museum Mimeograph Bull., no. 5.
5. Revised report for a new state museum and office building: Missouri Resources Museum Mimeograph Bull., no. 6, app. 9a.
6. Woody plants of Missouri: Missouri Resources Museum Mimeograph Bull., no. 7.
7. Musquakie (Sac and Fox) Indian collection in the state museum: Missouri Resources Museum Mimeograph Bull., no. 8.
8. Scattered sources of Missouri ecology (Bibl. of Natural History): Missouri Resources Museum Mimeograph Bull., no. 9.
9. The misty past yields up its secrets: Missouri Resources Museum Mimeograph Bull., no. 10.

Burnley, G. I.

The Conodonts of the shale overlying the Lexington coal bed of Lafayette County and Jackson County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1938.

Butts, Edward.

1. Recently discovered foot-prints of the amphibian age, in the upper Coal Measure group of Kansas City, Missouri: Kansas City Scientist, vol. 5, pp. 17-19, 4 figs., 1891.
2. Foot-prints of new species of amphibian in the upper Coal Measure group of Kansas City, Missouri: Kansas City Scientist, vol. 5, p. 44, 2 figs., 1891.

3. A description of a new species of Echinodermata from the upper Coal Measures of Kansas City (Missouri): *Kansas City Scientist*, vol. 5, p. 144, 1891.
4. Description of some species of crinoids from the upper Coal Measures of Carboniferous age at Kansas City, Missouri: *Kansas City Acad. Sci. Trans.*, vol. 1, pp. 13-15, 1 pl., 1898.

Cady, G. H.

1. Illinois and Missouri coal fields: *Coal Age*, vol. 13, p. 72, January 12, 1918.

Call, R. Ellsworth.

1. Loess of North America (A number of references to the occurrence of loess in Missouri are given.): *Am. Naturalist*, vol. 16, pp. 369-381, Philadelphia, 1882.
2. Tertiary silicified woods of eastern Arkansas (Incidental references are made to Missouri.): *Am. Jour. Sci. 3d ser.*, vol. 17, pp. 390-401, 1891.

Campbell, Marius Robinson.

1. Field work on samples of Missouri coals: *U. S. Geol. Survey Bull.* 261, p. 26, 1905.
2. Description of samples of Missouri coal collected for tests at St. Louis testing station, 1907: *U. S. Geol. Survey Prof. Paper* 48, pt. 1, pp. 96-102, 1906.
3. Classification of coals collected for tests at St. Louis testing station, 1904: *U. S. Geol. Survey Prof. Paper* 48, pp. 156-173, 1906.
4. Miscellaneous analyses of coal samples from the various fields of the United States (Gives analyses of Missouri coal.): *U. S. Geol. Survey Bull.* 471, pp. 629-655, 1912.
5. Miscellaneous analyses of coal samples from the various coal fields of the United States (Gives analyses of Missouri coals.): *U. S. Geol. Survey Bull.* 531, pp. 331-355, 1913.

Campbell, R. A.

1. Sectional, topographical and descriptive atlases of the State of Missouri (Includes first geological map of Missouri by Swallow.): folio, Saint Louis, 1873.
2. *Campbell's Gazetteer of Missouri*: 806 pp., 9 figs., incl. maps, (articles on resources and county descriptions): R. A. Campbell, publisher, St. Louis, 1874.

Cantwell, H. J.

1. The disseminated lead district of southeast Missouri: *Eng. and Min. Jour.*, vol. 97, pp. 287-290, 1914.

Carmody, Robert A.

1. (and Huffman, A.; Reed, E. C.; Grohskopf, J. G.; Workman, L. E.; and Tippie, F. E.). Geologic cross section from the granite ridge in southern Nebraska to the Salem field in Illinois: *Kansas Geol. Soc. Guidebook*, 15th Ann. Field Conf., p. 120, 1941.

Carpenter, P. Herbert.

1. (and Ethridge, R., Jr.). Catalogue of Blastoidea in geological department of British Museum (A number of species are recorded from Missouri and many observations are made on specimens from the state.): one vol., 288 pp., London, 1886.

Case, Ermine Cowles.

1. Traces of a glacier at Kansas City, Missouri: *Kansas Univ. Quart.*, vol. 2, pp. 149-150, 1894.
2. The brain and skull of a paleoniscid fish from the Pennsylvanian of western Missouri: *Am. Philos. Soc. Proc.*, vol. 78, no. 1, pp. 1-10, 2 pls., October 22, 1937.

Case, Theodore S.

1. The mineral region of southwest Missouri and southeast Kansas: *Western Rev. Sci.*, vol. 1, no. 7, p. 385, Kansas City, Missouri, 1880.
2. Geological surveys of Kansas and Missouri: *Western Rev. Sci.*, vol. 6, nos. 9-10, pp. 592-595, Kansas City, Missouri, 1880.
3. Missouri copper mines: *Kansas City Rev. Sci.*, vol. 6, pp. 304-307, 1882.

Chaloner, A. D.

1. On some fossil bones from Missouri: *Philadelphia Acad. Nat. Sci. Proc.*, vol. 1, pp. 321-322, 1843.

Chamberlin, T. C.

1. (and Salisbury, R. D.). Relationship of Pleistocene to pre-Pleistocene formations of Mississippi Basin south of limit of glaciation (incidental references are made to Missouri): *Am. Jour. Sci.*, 3d ser., vol. 41, pp. 359-377, 1891.
2. Supplementary hypothesis respecting the origin of the loess of the Mississippi Valley: *Jour. Geology*, vol. 5, pp. 795-802, 1897; abstracts, *Am. Geologist*, vol. 20, p. 197, 1897; *Science*, new ser., vol. 6, p. 689, 1897.

Chapman, Carl.

1. Stone-age men of Crawford County: *Missouri Resources Museum Mimeograph Bull.*, No. 16.

Chapman, Temple.

1. The Miami zinc-lead district: *Eng. and Min. Jour.*, vol. 93, pp. 1146-47, 1912.

Charles, B. E. Refer to Bridge, J.

Chauvenet, Regis. Refer also to Blair, A. A.

1. (and Blair, A. A.). Analyses of iron-ores, pig irons and fuels: *Missouri Geol. Survey, Preliminary report on the iron and coal fields from the field work of 1872*, pp. 31-45, New York, 1873.
2. Chemical analyses: *Missouri Geol. Survey Rept., Field Work of 1873-1874*, pp. 706-734, Jefferson City, Missouri, 1874.

Chauvenet, W. M.

1. Notes on the samples of iron ore collected in Kentucky; ... Tennessee; ... Alabama; ... Missouri: U. S. 10th Census, vol. 15, pp. 289-300, 351-365, 383-399, 403-420, maps, 1886.

Cheasley, J. C.

1. Technical problems of the coal industry: Mineral Indus. Conf. Proc., Rolla, Missouri, 1938, pp. 15-30, Rolla, Missouri, 1940.

Chellson, H. C.

1. More lead from southeast Missouri: Eng. and Min. Jour., vol. 138, no. 6, pp. 283-285, June, 1937.

Child, A. L.

1. The loess of the western plains-subaerial or sub-aqueous?: Kansas City Rev. Sci., vol. 4, pp. 293-194, 1880.

Christy, David.

1. Letters on geology: Being a series of communications addressed to Dr. John Locke, of Cincinnati, giving an outline of the geology of the west and southwest, together with an essay on the erratic rocks of North America, addressed to M. De Verneuil. Illustrated by geological sections and engravings of some rare fossils: J. M. Christy, Main St., Rossville, Ohio, 1848.

Clair, Joseph Robinson. Refer also to Greene, F. C.

1. (and Greene, F. C.). An unreported pre-glacial valley in north-eastern Jackson County, Missouri (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, p. 130, September 15, 1937; unpublished manuscript in file of Missouri Geol. Survey, Rolla, Missouri, 1937.
2. Oil and gas resources, Jackson County, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 91 pp., 32 pls., tables, figures, 5 maps, 3 pls. in pocket, Rolla, Missouri, 1938.
3. Oil and gas resources of Cass and Jackson Counties, Missouri: Missouri Geol. Survey and Water Resources, 2d ser., vol. 27, 208 pp., 7 pls., 14 figs., incl. maps and correlation chart, 1943.

Claridge, Elmond L.

1. Study of base exchange and attendant disintegration in Carthage marble: Univ. of Missouri, School of Mines and Met., unpublished thesis, 134 pp., Rolla, Missouri, 1941.

Clark, Allen W.

1. The story of barytes: pp. 1-10, illustrated by twenty-six pencil sketches by O. S. Berninghaus, portrayer of western life and scenes. Published by DeLore Baryta Company, St. Louis, Missouri, no date.

Clark, Edward Lee. Refer also to Grohskopf, J. G.

1. The findings of petrified logs in the lower Mississippian limestone of southwestern Missouri (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, pp. 122-123, 1937.

2. The St. Louis formation in southwestern Missouri: Missouri Geol. Survey and Water Resources, 59th Bienn. Rept. State Geologist, 1935-1936, app. 4, 13 pp., 1937.
3. The geology of the Mary Arnold mines, Christian County, Missouri (abstract): Missouri Acad. Sci. Proc., vol. 7, no. 4, pp. 109-110, 1941.
- 3A. Geology of the Cassville Quadrangle, Barry Co., Missouri: Univ. of Missouri, unpublished thesis, 228 pp., 3 pls., 36 figs., Columbia, Missouri, 1941.
4. Henry Andrew Buehler: Science, new ser., vol. 99, no. 2583, pp. 525-526, June 30, 1944.
5. Mineral Resources map of Missouri, scale: approx. 1:600,000: Missouri Geological Survey and Water Resources, 1944.
6. Biennial report of the State Geologist to the 63d General Assembly, 1943-44: Missouri Geological Survey and Water Resources, 94 pp., 1945.

Clark, John Mason. Refer to Whorton, C. and Hall, J.

Clark, J. M.

1. The geology of an area near Mineola, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1926.

Clark, William. Refer to Lewis, M.

Clarke, F. W.

1. Miscellaneous analyses (Gives the results of analyses of some Missouri cherts, tallow clays and limestone.): U. S. Geol. Survey Bull. 90, pp. 63-64, 1892.

Clarke, S. K.

1. The mechanics of the plains—type of folds of the northern mid-continent area: Jour. Geology, vol. 40, pp. 46-61, 1932.

Claypole, E. W.

1. Story of Mississippi-Missouri: Am. Geologist, vol. 3, pp. 361-378, 1889.

Clemmer, J. Bruce. Refer also to Diener, F. P.

1. (and Devaney, F. D.). Present trends in mineral dressing (abstract): Missouri Acad. Sci. Proc., vol. 4, no. 6, pp. 138-140, March, 1939.

Clerc, Frank Laurent.

1. Lead and zinc ores of southwest Missouri: Eng. and Min. Jour., vol. 43, pp. 397-398, 1887.
- 1A. Mineral resources of Joplin, Missouri: Eng. and Min. Jour., vol. 49, p. 308, 1890.
- 1B. Ore deposits of the Joplin District: Colorado Sci. Soc. Proc., vol. 8, pp. 199-220, 1906.
2. The ore deposits of the Joplin region, Missouri: Am. Inst. Min. Eng. Bull., vol. 14, pp. 353-376, 1907; Trans., vol. 38, pp. 320-343, 1908.

Clifford, Thomas J.

1. Improvements in milling in the southeast Missouri lead district: *Mining and Metallurgy*, vol. 15, no. 328, pp. 167-168, April, 1934.

Cline, Lewis Manning.

1. Osage formations of southern Ozark region, Missouri, Arkansas, and Oklahoma: *Am. Assoc. Petroleum Geologists Bull.*, vol. 18, no. 9, pp. 1132-1159, 2 figs., September, 1934.
2. Blastoids of the Osage group, Mississippian, pt. 1, The genus *Schizablastus*: *Jour. Paleontology*, vol. 10, no. 4, pp. 260-281, 2 pls., June, 1936; Pt. 2, The genus *Cryptoblastus*: *Jour. Paleontology*, vol. 11, no. 8, pp. 634-649, 2 pls., December, 1937; (abstract) *Geol. Soc. America Proc.*, 1936, p. 360, June, 1937.
3. Correlation of Pennsylvanian Des Moines series of southwestern Iowa and northwestern Missouri (abstract): *Geol. Soc. America Bull.*, vol. 49, no. 12, pt. 2, p. 1873, December 1, 1938.
4. Traverse of upper Des Moines and lower Missouri series from Jackson County, Missouri, to Appanoose County, Iowa: *Am. Assoc. Petroleum Geologists Bull.*, vol. 25, no. 1, pp. 23-75, January, 1941.

Cloud, Preston E.

1. Terebratuloid Brachiopoda of the Silurian and Devonian: *Geol. Soc. America, Special Papers* no. 38, 1942.

Cobb, H.

1. Geological Survey of Missouri: *Western Jour. and Civilian*, vol. 9, p. 319, 1852; vol. 12, pp. 1-7, 1854.
2. Missouri Coal: *Western Jour. Civilian*, vol. 11, p. 273, 1858.
3. Notes on the history of lead mining in Missouri: *Missouri Geol. Survey, field work of 1873-74*, pp. 672-685, Jefferson City, Missouri, 1874.

Coghill, W. H.

1. (and Anderson, C. O.). Milling methods in the Tri-State zinc district: *U. S. Bureau of Mines Rept. of Inves.* 2314, 14 pp., 1922.
2. (and Anderson, C. O.). Premiums and penalties on Tri-State zinc ores: *Bull. Am. Zinc Inst.*, vol. 5, no. 12, December, 1922.
3. (and Anderson, C. O.). Progressive enrichment of zinc chats with decreasing size: *Eng. and Min. Jour.*, vol. 116, pp. 321-324, 1923.
4. (and Anderson, C. O.). Concentration in the Tri-State District: *Bull. Am. Zinc Inst.*, vol. 8, no. 5, May 1925.
5. Fine grinding in the Tri-State District: *Bull. Am. Zinc Inst.*, vol. 12, nos. 5 and 6, May-June, 1929.
6. Milling methods and costs at a Flat River (Missouri) mill: *U. S. Bureau of Mines Inf. Circ.* 6658, 36 pp., 11 figs., 1932.

Cohen, Emil Wilhelm.

1. Meteoreisen—Studies: *An Kaiserlich-konigliche naturhistorische Hofmuseum, Annalen, Wien (Austria)*, vol. 7, pp. 143-162, 1892.

Collins, Lawrence.

1. (and Hatch, S. R.). Gaging of the Gasconade River: Univ. of Missouri, School of Mines and Met. unpublished thesis, Rolla, Missouri, 1914.

Comins, W. W.

1. Technical problems of the barytes industries: Mineral Indus. Conf. Proc., Rolla, Missouri, 1938, pp. 70-72, Rolla, Missouri, 1940.

Condra, George Evert.

1. The stratigraphy of the Pennsylvanian system in Nebraska: Nebraska Geol. Survey Bull. 1, 2d ser., 291 pp., 1927.
2. Correlation of the Pennsylvanian beds in the Platte and Jones Point sections of Nebraska: Nebraska Geol. Survey Bull. 3, 2d ser., 57 pp., 1930.
3. Geologic cross section, Forest City, Missouri, to Du Bois, Nebraska: Nebraska Geol. Survey Paper 8, 23 pp., 1 fig., 1935.
4. (and Reed, E. C.). Correlation of the members of the Shawnee group in southeastern Nebraska and adjacent areas of Iowa, Missouri and Kansas: Nebraska Geol. Survey Bull. 11, 2d ser., 64 pp., 2 pls., June, 1937.
5. (and Elias, M. K.). Study and revision of *Archimedes* (Hall): Geol. Soc. America, Special Papers no. 53, pp. 5-6, 1944.

Connolly, J. P.

1. The Chouteau formation of east central Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1915.

Conrad, T.

1. Descriptions of eight new fossil shells of the United States (*Bellerophon scissile* is described from Ste. Genevieve County.): Philadelphia Acad. Nat. Sci. Proc., vol. 2, pp. 173-175, 1846.

Conrad, —.

1. Irondale Iron Interests: Mines, Metals and Arts, vol. 1, no. 3, p. 19, March 26, 1874.

Conselman, Frank B.

1. The geology and stratigraphic petrography of the Auxvasse Creek quadrangle, Callaway County, Missouri: Missouri Acad. Sci. Proc., vol. 1, pp. 101-120, 1935; Univ. of Missouri, thesis, Columbia, Missouri, 1934.

Cooke, Strathmore Ridley Barnott. Refer also to Devaney, F. D. and Diener, F. P.

1. Laboratory concentration of the Missouri iron ores of Iron Mountain and Pilot Knob: Univ. of Missouri, School of Mines and Met., unpublished thesis, 65 pp., il., tables, graphs, Rolla, Missouri, 1930.

Cooper, C. L.

1. Conodonts from a Bushberg-Hannibal horizon in Oklahoma: Jour. Paleontology, vol. 13, pp. 379-422, 1939.

2. Occurrence and stratigraphic distribution of Paleozoic ostracodes: Jour. Paleontology, vol. 16, pp. 764-776, 1942.
3. *Bairdia cloresnsis* Cooper, new name for *B. sinuosa* Cooper, 1941: Jour. Paleontology, vol. 17, p. 629, 1943.

Cooper, Gustav Arthur. Refer also to Bridge, J., and Ulrich, E. O.

- 1A. Correlation of the Devonian sedimentary formations of North America: Geol. Soc. America Bull., vol. 53, pp. 1729-1794, 1942.
1. Remarks on correlation of Devonian formations in Illinois and adjacent states; Symposium on Devonian stratigraphy: Illinois Geol. Survey Bull., no. 68, pp. 217-222, 1 fig., 1944.

Cooper, H. M. Refer to Fieldner, A. C.

Cordry, Cletus D.

1. Heavy minerals in the Roubidoux and other sandstones of the Ozark region, Missouri: Jour. Paleontology, vol. 3, no. 1, pp. 59-85, 5 pls., March, 1929; reprinted Univ. of Missouri, School of Mines and Met. Bull., vol. 11, no. 4, pp. 1-26, 1928.

Cornwall, H. B.

1. Occurrence of greenockite on calcite from Joplin, Missouri: Am. Jour. Sci., 4th ser., vol. 14, pp. 7-8, 1902.

Coryell, Horace Noble.

1. Mississippian formations in southern Illinois: Jour. Paleontology, vol. 13, pp. 203-210, 1939.

Cox, G. H. Refer also to Dake, C. L.

1. (and Dean, R. S., and Gottschalk, V. H.). Studies on the origin of Missouri cherts and zinc ores: Univ. of Missouri, School of Mines and Met. Bull., vol. 3, no. 2, pp. 34, November, 1916.

Cozzens, Arthur Bertrand.

1. Stratigraphy and petrology of the Kinderhook formation near St. Albans (Franklin Co.): Washington Univ., unpublished thesis, 75 pp., front., 1929.
2. Analyzing and mapping natural landscape factors of the Ozark province: St. Louis Acad. Sci. Trans., vol. 30, no. 2, pp. 37-63, 11 figs., incl. index and geol. maps, May 31, 1939.
3. Physical profiles of the Ozark Provinces: Am. Midland Naturalist, vol. 24, no. 2, pp. 477-489, 12 figs., September, 1940.
4. The iron industry of Missouri: The Missouri Historical Rev., vol. 35, no. 4, pp. 509-538; vol. 36, no. 1, pp. 48-60, July and October 1941.
5. Gopher-hole barite mining in Washington County, Missouri: Illinois Acad. Sci. Trans., vol. 34, no. 2, p. 143-144, 1 fig., September, 1941.

Crabtree, Edwin H., Jr.

1. (and Netzeband, W. F.). Quarry and plant of Reliance Rock Asphalt Co.: Am. Inst. Min. Met. Eng. Contr. 77, 9 pp., 2 figs., February, 1935; abstracts, Year Book sec., p. 59, January, 1936; Mining and Metallurgy, vol. 16, no. 339, p. 159, March, 1935.

2. Milling practice at the White Bird Concentrator, Canam Metals Corporation, Picher, Oklahoma: U. S. Bureau of Mines Inf. Circ. 6355, 1930.

Craig, T. C.

1. The mineralogy of the channel sands north of Columbia, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1928.

Crane, Guy Walter.

1. The iron ores of Missouri: Missouri Bur. Geol. and Mines, vol. 10, 2d ser., 434 pp., 48 pls., 29 figs., 1 map, 1912.

Crane, Walter Richard.

1. Geography and detailed stratigraphy of the Kansas Coal Measures; description of mines, mining methods, and mining machinery; chemical and physical properties of Kansas coal; output and commerce; mining directory and mining laws: Kansas Univ. Geol. Surv., vol. 3, pp. 108-336, pls., 31-70, figs., 4-54, 1898.
2. Recent changes in mining and milling in the Galena-Joplin lead and zinc district: Eng. and Min. Jour., vol. 74, no. 13, pp. 405-408, September 27, 1902.
3. Mining and milling in the Kansas lead and zinc district: Kansas Geol. Survey, vol. 8, pt. 2, pp. 173-386, 1904.
4. (and Adams, G. I.). Lead and zinc mining in the Quapaw District, Oklahoma: Mines and Minerals, vol. 27, pp. 445-446, 1907.

Credner, Hermann.

1. Beschreibung von Mineralvorkommen in Nordamerika: (numerous references to American and some to Missouri iron) Berg- und huttenmannische Zertung, vol. 25, Leipzig, 1866.

Cribbs, James Elias.

1. A new *Cordaites* from Missouri: Science, new ser., vol. 78, no. 2023, pp. 311-312, October 6, 1933.
2. *Cordaites missouriense*, from the lower Carboniferous of Missouri: Am. Jour. Botany, vol. 22, no. 4, pp. 427-438, 3 pls., 1 text fig., April, 1935.
3. On the structure of fossil wood from the Mississippian of southern Missouri: Missouri Acad. Sci. Proc., vol. 3, no. 4, pp. 72-75, 1937.
4. A new fossil plant from the Reeds Spring formation of southwestern Missouri: Am. Jour. Botany, vol. 25, no. 5, pp. 311-421, 4 pls., 2 figs., May, 1938.
5. *Cauloxylon ambiguum*, gen. et. sp. nov., a new fossil plant from the Reeds Spring formation of southwestern Missouri: Am. Jour. Botany, vol. 26, no. 6, pp. 440-449, 24 fig., June, 1939.
6. Preliminary report on a fossil plant of pithecan relationship from the Reeds Spring formation of Missouri: Missouri Acad. Sci. Proc., vol. 5, no. 4, pp. 92-93, 1940.
7. Structure of fossil stem of pithecan affinity, from the Reeds Spring formation of Missouri: Bot. Gaz., vol. 101, no. 3, pp. 582-597, 19 figs., 1940.

8. On a new species of fossil seed plant from the Reeds Spring formation of southwest Missouri: *Missouri Acad. Sci. Proc.*, vol. 5, no. 4, p. 92, 1940.

Croneis, Carey Gardiner.

1. (and Hoffman, A. D.). The fauna of the middle Devonian Beauvais sandstone of Missouri: *Science*, new ser., vol. 73, pp. 134-135, January 30, 1931.
2. (and Scott, H. W.). Scolecondonts from the Decorah formation of Missouri (abstract): *Geol. Soc. America Bull.*, vol. 44, pt. 1, p. 208, February 28, 1933.
- 2A. (and Gale, A. S.). New ostracodes from the Golconda formation: *Dennison Univ. Bull.*, vol. 38, pp. 251-291, 1938.
3. Possible evidence of "pre-Historic" man in southeastern Missouri (abstract): *Geol. Soc. America Bull.*, vol. 50, no. 12, pt. 2, p. 1963, December 1, 1939.
4. Devonian of southeastern Missouri; Symposium on Devonian stratigraphy: *Illinois State Geol. Survey Bull.*, no. 68, pp. 103-131, 7 figs., 1944.

Cronk, A. H.

1. Fire clay of Phelps County: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1912.

Crook, Alja Robinson.

1. Missouri lead and zinc regions visited by the Geological Society of America: *Science*, new ser., vol. 19, pp. 197-198, 1904.

Crosby, Mary Francis.

1. The urbanization of the River des Peres (an area in St. Louis and St. Louis Co.): Washington University, unpublished thesis, 74 pp., 11 figs., 12 pl., St. Louis, Missouri, 1933.

Cullison, James Shelley. Refer also to Grawe, O. R.

1. Revision of the Jefferson City formation in the Rolla quadrangle, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 1930.
2. (and Muilenburg, G. A.). A newly found (discovered July, 1922) meteorite from Lanton, Howell County, Missouri: *Jour. Geology*, vol. 42, no. 3, 305-308, 2 figs., April-May, 1934.
3. Dutchtown fauna of southeastern Missouri: *Jour. Paleontology*, vol. 12, no. 3, pp. 219-228, 1 pl., May, 1938.
4. Origin of composite and incomplete internal molds and their possible use as criteria of structure: *Geol. Soc. America Bull.*, vol. 49, pp. 981-988, 1 pl., June 1, 1938; (abstract) *Proc.* 1936, p. 69, June, 1937.
5. The stratigraphy of some lower Ordovician formations of the Ozark uplift: University of Missouri, School of Mines and Met. Bull., Tech. Ser., vol. 15, no. 2, 112 pp., June, 1944.
6. (and Ellison, S. P.). Diamond-drill core from Bourbon High, Crawford County, Missouri: *Am. Assoc. Petroleum Geologists Bull.*, vol. 28, no. 9, pp. 1386-1396, September, 1944.

Cummings, Edgar Roscoe.

1. The use of Bedford as a formational name: *Jour. Geology*, vol. 9, pp. 232-233, 1901.

Cuno, Charles W.

1. Chemical and mineral resources of the St. Louis industrial district: *Indus. Club of St. Louis, Missouri*, pp. 1-34, St. Louis, 1930.

Dahm, Cornelius George. Refer also to Bradford, D. C.

1. The southeastern Illinois earthquake of October 29, 1934: *Missouri Acad. Sci. Proc.*, vol. 1, p. 131, 1935.

Dake, Charles Laurence. Refer also to Bridge, J.

1. Iron: *Jour. Geography*, vol. 12, pp. 165-170, 1914.
2. Petroleum: *Jour. Geography*, vol. 12, pp. 197-202, 1914.
3. Gold: *Jour. Geography*, vol. 12, pp. 9-12, 1914.
4. Stream piracy and natural bridges in the loess of southeast Missouri: *Jour. Geology*, vol. 22, pp. 498-499, 1914.
5. The formation and distribution of residual iron ores: *Am. Inst. Min. Met. Engr. Bull.*, vol. 101, pp. 937-946, 1916; *Trans.*, vol. 53, pp. 116-124, 1915.
6. The formation and distribution of bog iron ore deposits (with discussion by Lawson, A. C. and Cox, G. H.): *Am. Inst. Min. Met. Engr. Bull.*, vol. 103, pp. 1429-1436, 1915; vol. 108, pp. 2475-2476, 1915; *Trans.*, vol. 53, pp. 106-115, 1916.
7. (and Cox, G. H.). Geological criteria for determining the structural position of sedimentary beds: *Univ. of Missouri, School of Mines and Met. Bull.* 2, no. 4, 59 pp., 1916.
8. Sand and gravel resources of Missouri: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 15, 274 pp., 47 pls., 2 figs., 1918.
9. The problem of the St. Peter sandstone (Doctor of Philosophy dissertation, Columbia University): *Univ. of Missouri, School of Mines and Met. Bull.*, Tech. ser., vol. 6, 225 pp., 30 pls., 1921.
10. Derivation of the Peter sandstone: *Pan-Am. Geologist*, vol. 37, pp. 244-245, 1922.
11. Taxonomic significance of Peter sandstone: *Pan-Am. Geologist*, vol. 37, pp. 288-300, 1922.
12. Memorial of Guy Henry Cox: *Geol. Soc. America Bull.*, vol. 34, pp. 15-18, portr., 1923.
13. (and Bridge, J.). Subterranean stream piracy in the Ozarks: *Univ. of Missouri, School of Mines and Met. Bull.*, Tech. ser., vol. 7, pp. 3-14, 8 pls., 7 figs., 1923.
- 13A. Geology and origin of sand and gravel deposits: *Rock Products*, vol. 27, p. 148, March 8, 1924.
- 13B. Geology of sand and gravel: *Natl. Sand and Gravel Bull.*, no. 5, p. 11, March 15, 1924.
- 13C. Origin of sand and gravel: *Natl. Sand and Gravel Bull.*, no. 7, p. 5, January 15, 1926.
14. (and Bridge, J.). Early diastrophic events in the Ozarks (abstract): *Geol. Soc. America Bull.*, vol. 38, pp. 157-158; *Pan-Am. Geologist*, vol. 47, pp. 155-156, 1927.
15. The geology of Potosi and Edgehill quadrangles: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 23, 233 pp., 26 pls., maps, 1930.

16. (and Bridge, J.). Buried and resurrected hills of the central Ozarks: *Am. Assoc. Petroleum Geologists Bull.*, vol. 16, pp. 629-652, 4 figs., July 1932; (abstract), *Pan-Am. Geologist*, vol. 57, no. 4, p. 309, May, 1932.
17. Ore deposits of the Tri-State district (discussion of paper by Fowler, G. M. and Lyden, J. P.): *Am. Inst. Min. Met. Eng. Trans.*, vol. 102, pp. 206-251, pp. 241-242, 244-245, 1932.
18. Basal Pennsylvanian transgression in the Ozarks (abstract): *Geol. Soc. America Proc.* 1933, pp. 74-75, 1934; *Geol. Soc. America Bull.*, vol. 46, pp. 697-714, 1935.

Dana, Edward Salisbury.

1. (and Penfield, S. L.). Artificial crystallized lead silicate (from Bonneterre, Missouri): *Am. Jour. Sci.*, 3d ser., vol. 30, pp. 138-140, 1885.
2. (and Penfield, S. L.). On two hitherto undescribed meteoric stones (Utah and Cape Girardeau, Missouri): *Am. Jour. Sci.*, 3d ser., vol. 32, pp. 226-231, 1886.

Dana, James Dwight.

1. Mastodon Giganteus: *Am. Jour. Sci.*, vol. 2, 2nd ser., p. 131, 1846.
2. "On the Coal Measures of Missouri, by G. C. Swallow": *Am. Jour. Sci.*, vol. 26, 2nd ser., p. 113, 1858.
3. Notice of "Descriptions of new species of Blastoidea from the Paleozoic rocks of the western states, with some observations on the structure of the summit of the genus *Pentremites*; by B. F. Shumard": *Am. Jour. Sci.*, 2nd ser., vol. 26, p. 127, 1858.
4. Notice of "Observations on the geology of the county of Ste. Genevieve, being an extract from the report made to the Missouri Geological Survey in 1850, by B. F. Shumard" (*Trans. Acad. Sci. St. Louis*): *Am. Jour. Sci.*, 2nd ser., vol. 29, p. 126, 1860.
5. Notice of "Third series of descriptions of Bryozoa, from the Palaeozoic rocks of the western states and territories, by H. A. Prout" (*Trans. Acad. Sci. St. Louis*) 2 pp.: *Am. Jour. Sci.*, 2nd ser., vol. 29, p. 126, 1860.
6. Dr. Engelmann's measurement of the elevation of St. Louis above the Gulf of Mexico: *Am. Jour. Sci.*, 2nd Ser., vol. 30, p. 394, 1860.
7. Notice of "Observations upon the rocks of the Mississippi Valley which have been referred to the Chemung group of New York, together with descriptions of new species of fossils from the same horizon at Burlington, Iowa; by C. A. White and R. P. Whitfield": *Am. Jour. Sci.*, 2d ser., vol. 33, p. 422, 1862.
8. Notice of "Geological survey of Missouri; Raphael Pumpelly, Preliminary report on the iron ores and coal fields from the field work of 1872": *Am. Jour. Sci.*, 3d ser., vol. 7, p. 61, 1874.
9. On Dr. Koch's evidence with regard to the contemporaneity of man and the mastodon in Missouri: *Am. Jour. Sci.*, 3d ser., vol. 9, pp 335 and 398, 1875.
10. Artesian boring at the St. Louis insane asylum: *Am. Jour. Sci.*, 3d ser., vol. 9, p. 61, 1875.
11. Notice of geological sketch of the state of Missouri by G. C. Swallow, 1873: *Am. Jour. Sci.*, vol. 9, p. 63, 1875.

12. Notice of "Report of the geological survey of Missouri, including field work of 1873-4": Am. Jour. Sci., 3d ser., p. 148, 1875.
13. Forms and origin of the lead and zinc deposits of southwestern Missouri, by Adolf Schmidt; abstract from paper in Trans. St. Louis Acad. Sci.: Am. Jour. Sci., 3d ser., vol. 10, p. 300, 1875.
14. Remains of the Quaternary peccary, *Platygonus compressus*: Am. Jour. Sci., 3d ser., vol. 39, p. 322, 1890.

Darton, N. H.

1. Catalogue and index of contributions to North America geology, 1732-1891: U. S. Geol. Survey Bull. 127, 1045, pp., 1896.

Davidson, L. E. Refer to Bowles, J. H.

Davies, J. D.

1. Stratigraphy and ostracode distribution of the Cherokee and Henrietta formations of Randolph, Chariton, and Boone counties: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1936.

Davis, Walter Beckford.

1. (and Durrie, D. S.). Physical geography of Missouri. An illustrated history of Missouri, comprising its early record, and civil, political, and military history from the first exploration to the present time, etc., A. J. Hall & Co., 1876.

Davis, Willard Eugene.

1. (and Herold, P. C., and McManamy, L.). Further investigations of southeastern Missouri clays: Missouri Geol. Survey and Water Resources, Bienn. Rept. State Geologist, 1939-40, app. 1, 48 pp., 3 maps, 1941.

Davis, William Morris.

1. The Osage River and the Ozark uplift: Science, vol. 22, pp. 276-279, 1893.
2. Origin of limestone caverns (considers Missouri Cave regions): Geol. Soc. America Bull., vol. 41, pp. 475-628, 1930.

Day, David Talbot.

1. Minerals resources of the United States, 1885 (reference to Missouri mineral production): U. S. Geol. Survey, 576 pp., 1886.
2. Mineral resources of the United States, 1886 (references to Missouri mineral production): U. S. Geol. Survey, 813 pp., 1887.
3. Mineral resources of the United States, 1887 (references to Missouri mineral production): U. S. Geol. Survey, 832 pp., 1888.
4. Mineral resources of the United States, 1888 (references to Missouri mineral production): U. S. Geol. Survey, 652 pp., 1890.
5. Mineral resources of the United States, 1889-90 (references to Missouri mineral production): U. S. Geol. Survey, 671 pp., 1892.
6. Mineral resources of the United States, 1891 (references to Missouri mineral production): U. S. Geol. Survey, 630 pp., 1892.
7. Mineral resources of the United States, 1892 (references to Missouri mineral production): U. S. Geol. Survey, 850 pp., 1893.
8. Mineral resources of the United States, 1893 (references to Missouri mineral production): U. S. Geol. Survey, 810 pp., 1894.

Dean, Reginald S. Refer also to Cox, G. H.

1. The formation of Missouri cherts: *Am. Jour. Sci.*, 4th ser., vol. 45, pp. 411-415, 1918.

Decker, L. V.

1. The Devonian of Boone County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1925.

DeKay, J. E.

1. Notes on fossil skull in cabinet of lyceum, of genus *Bos*, from banks of the Mississippi; with observations on American species of that genus (Describes *Bos pallasii* from New Madrid.): *New York Lyceum Nat. Hist. Annals*, vol. 2, pp. 280-292, 1862.

Delamater, G. R.

1. Washing tests of Missouri coal: *U. S. Geol. Survey Bull.* 332, pp. 168, 172, 1908.
2. Washing tests of Missouri coal: *U. S. Geol. Survey Bull.*, 336, pp. 14-15, 1908.

Delano, L. A.

1. The milling practice of the St. Joseph Lead Company: *Am. Inst. Min. Eng. Trans.*, vol. 57, pp. 420-441, 1917.
2. Milling practice in the Lead Belt: *Eng. and Min. Jour.*, vol. 138, no. 6, pp. 286-291, June, 1937.

Delaunay, L. Refer to Fuchs, E.

Delo, David Marion. Refer also to Ball, J. R.

1. Pennsylvanian Ostracoda from Hamilton County, Kansas: *Washington Univ. Studies*, new ser., Science and Technology, vol. 5, pp. 41-51, 1 pl., October, 1931.
2. Locomotive habits of some trilobites: *Am. Midland Naturalist*, vol. 16, no. 3, pp. 406-409, May, 1935.
3. Genotype of *Dalmanites* (abstract): *Geol. Soc. America Proc.* 1934, p. 360, June, 1935.
4. A revision of the phacopid trilobites: *Jour. Paleontology*, vol. 9, no. 5, pp. 402-420, 45 figs., July, 1935.
5. New Phacopinae from the Devonian of Oklahoma and Iowa: *Jour. Paleontology*, vol. 9, no. 5, pp. 421-423, 5 figs., July, 1935; Abstract, *Geol. Soc. America Proc.* 1934, p. 360, June, 1935.
6. North American phacopid trilobites (abstract): *Geol. Soc. America Proc.* 1937, p. 76, June, 1938.
7. Evolution of North American phacopid trilobites (abstract): *Geol. Soc. America Proc.* 1937, p. 275, June, 1938.
8. Phacopid trilobites of North America: *Geol. Soc. America Special Paper* 29, vii, 135 pp., 13 pls., December 31, 1940.

Denham, Richard L. Refer also to Tolman, C.

1. Igneous rocks at Skrainka, Madison County, Missouri: *Washington University*, unpublished thesis, 49 pp., 30 figs., 2 pls., St. Louis, Missouri, 1934.

Desor, E.

1. Remarks on fine skeleton of a mastodon seen at Galena, Missouri: Boston Soc. Nat. Hist. Proc., vol. 3, p. 207, 1859.

Detweiler, M. H.

1. (and Townsend, F. E.). Mine map and geology of Saltpeter Cave: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1911.

DeVaney, Frederick D. Refer also to Clemmer, J. B.

1. (and Cooke, S. R. B.). Laboratory concentration of the Missouri iron ores of Iron Mountain and Pilot Knob: Univ. of Missouri, School of Mines and Met. Bull., Tech. Ser., vol. 11, no. 3, May, 1928.

Dewey, F. P.

1. Preliminary descriptive catalogue of systematic collection in economic geology and metals in U. S. National Museum (numerous references to Missouri products): U. S. Nat. Museum Bull. 42, 177 pp., 1891.

De Windt, Edward A. Refer to Robertson, P.

Diener, F. P.

1. (and Clemmer, J. B. and Cooke, S. R. B.). Take chert from limestone at Universal Atlas plant: Concrete, vol. 44, no. 5, pp. 41-42, May, 1936.

Dille, I.

1. Mineral resources of southern Missouri: Hunt's Merchant's Mag., New York, vol. 13, 1845.
2. Mineral region and resources of Missouri: Hunt's Merchant's Mag., New York, vol. 15, p. 28, 1846.

Dodge, J. R.

1. Mineral fertilizers of Mississippi Valley: U. S. Agri. Rep., 1869, pp. 560-562, Washington, 1869.

Doll, Warwick L.

1. Hydrography of the larger springs of the Ozark region of Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 106 pp., tables, diagrs., graphs, maps, 1 fold., Rolla, Missouri, 1938.
2. Large springs, the pirates of the Ozark: Missouri Acad. Sci. Proc., vol. 5, no. 4, p. 133, 1940.

Drake, Robert T.

1. Revision of the genus *Schmidtella* (abstract): Missouri Acad. Sci. Proc., vol. 5, p. 132, 1940.

Drushel, J. Andrew.

1. Glacial drift under the Saint Louis loess: Jour. Geology, vol. 16, pp. 493-498, 1908.

2. Studies in glacial geology in Saint Louis and vicinity: St. Louis Acad. Sci. Trans. vol. 20, 27-36, 1911.

Duckworth, A. S.

1. Fossil leaves from southeast Missouri: Missouri Acad. Sci. Proc., vol. 6, no. 4, pp. 84-86, March, 1941.

Dunbar, Carl Owen. Refer also to Miller, A. K.

1. Stratigraphy and correlation of the Devonian of Western Tennessee: Tennessee Geol. Survey Bull. 21, 127 pp., 1919.
- 1A. (and Condra, George Evert). Brachiopoda of the Pennsylvanian system in Nebraska: Nebraska Geol. Survey 2d ser. Bull. 5, 377 pp., 1932.
2. (and Weller, J. M. and Henbest, L. G.). Stratigraphy of the fusuline-bearing beds of Illinois: Illinois Geol. Survey Bull. 67, pp. 9-34, 1942.
3. (and Henbest, L. G.). Pennsylvanian Fusulinidae of Illinois: Illinois Geol. Survey Bull. 67, pp. 35-217, 1942.

Duncan, C. Refer to Bisat, W. S.

Dunlap, Howard L.

1. (and others). The carbonization of Missouri cannel coals: Univ. of Missouri, School of Mines and Met. Bull., vol. 5, no. 1, 52 pp., Rolla, Missouri, August, 1918.
2. Missouri cannel coals: Chem. and Met. Eng., vol. 22, p. 774, 1920.

Dunn, Paul Heaney. Refer also to Ball, J. R.

1. A remarkable fossiliferous lens in the Bainbridge limestone (abstract): Ohio Jour. Sci., vol. 31, no. 4, pp. 278-279, July, 1931.

Dunnington, F. P.

1. Distribution of titanite upon surface of earth (gives analyses of certain soils of Missouri): Am. Jour. Sci., 3d ser., vol. 42, pp. 492-495, 1891.

Durrie, D. S. Refer to Davis, W. B.

Dutton, Clarence Edward.

1. Charleston (South Carolina) earthquake of August 31, 1886 (notes on the shock as felt in several parts of Missouri are given on pages 461 and 463): U. S. Geol. Survey 9th Ann. Rept., pp. 205-528, 1889.

Eakins, L. G.

1. Miscellaneous analyses (Five samples of limestone from southwest part of state were analyzed.): U. S. Geol. Survey Bull. 78, p. 125, 1891.

Easton, William H.

1. Corals from the Chouteau and related formations of the Mississippi Valley region: Illinois State Geol. Survey, Report of Investigation, no. 97, 62 pp., 17 pls., April 1, 1944.

Eaton, Theodore Hildreth, Jr.

1. A paleoniscid brain case (from Kansas City area): Washington Acad. Sci. Jour., vol. 29, no. 10, pp. 441-451, 5 fig., October 15, 1939.

Eckel, Edwin C.

1. Cement materials and industry of the United States: U. S. Geol. Survey Bull. 243, pp. 219-227, 1905.
2. Portland cement materials and industry in the United States: U. S. Geol. Survey Bull. 522, pp. 246-253, 1913.

Edson, Fanny Carter.

1. Resume of St. Peter stratigraphy: Am. Assoc. Petroleum Geologists Bull., vol. 19, pp. 1110-1130, 1935.

Ekblaw, George E.

1. (and Workman, L. E.). Subsurface geology in the east St. Louis region (abstract): Illinois Acad. Sci. Trans., vol. 26, no. 3, pp. 101, March, 1934.

Eldridge, George H.

1. The asphalt and bituminous rock deposits of the United States: U. S. Geol. Survey 22d Ann. Rept. pt. 1, pp. 259-261, 1901.

Elias, Maxim Konard. Refer also to Condra, G. E.

1. On a seed-bearing Annularia and on Annularia foliage: Kansas Univ. Sci. Bull., vol. 2, pp. 115-159, 1931.
2. Studies of late Paleozoic ammonoids: 1. Methods of drawing sutures, bibliography; 2. Revision of *Gonioloboceras* from late Paleozoic rocks of the Mid-continent region; 3. *Properrinites plummeri* Elias, new gen. and sp., from late Paleozoic rocks of Kansas: Jour. Paleontology, vol. 12, no. 1, pp. 86-90, 2 pls., 2 figs., January, 1938.

Elliott, R. S.

1. The minerals of Missouri: Missouri State Board of Agriculture 3d Ann. Rept., pp. 228-243, 1868.

Ellis, E. E.

1. Zinc and lead ore bodies in Tri-State District: Eng. and Min. Jour., vol. 121, pp. 199-209, 1927.

Ellison, Samuel. Refer also to Grohskopf, J. G. and Cullison, J. S.

1. Stratigraphic distribution, relation to sedimentary cycles, and evolutionary tendencies of conodonts in the Missouri series (Pennsylvanian) of Jackson County, Missouri (abstract): Geol. Soc. America Proc. 1937, p. 277, June, 1938; Univ of Missouri, thesis, Columbia, Missouri, 1938.
2. Conodonts as index fossils in the Pennsylvanian of Missouri and Kansas (abstract): Geol. Soc. America Bull., vol. 40, no. 12, pt. 2, p. 1913, December 1, 1938.

3. Revision of the Pennsylvanian conodonts: Jour. Paleontology, vol. 15, no. 2, pp. 105-143, 4 pls., 4 figs., March, 1941; Univ. of Missouri, thesis, Columbia, Missouri, 1940.
4. The composition of conodonts: Jour. Paleontology, vol. 18, no. 2, pp. 133-140, March, 1944.

Emerson, F. V.

1. Geography of Missouri: Univ. of Missouri Bull., Educational ser., vol. 1, no. 4, 74 pp., 1912.
2. A geographical interpretation of Missouri: The Geographical Jour., vol. 13, pp. 39-48, 130-145, 1913.

Emery, J. B.

1. Description of Marble cave (since known as Marvel Cave), Missouri: Kansas City Rev. Sci., vol., 8, pp. 614-623, 1885.

Emmons, William Harvey.

1. The enrichment of ore deposits: U. S. Geol. Survey Bull. 625, pp. 102-104, 368-370, 1917.
2. The origin of the deposits of sulfide ores of the Mississippi Valley: Econ. Geology, vol. 24, no. 3, pp. 221-271, 14 figs., May, 1929.
3. Diatremes and certain ore-bearing pipes: Am. Inst. Min. Met. Eng. Tech. Pub. 891, 15 pp., May, 1938.

Engel, A. E.

1. Geology of the House Spring Area: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1939.

Engelmann, George.

1. Carboniferous rocks of St. Louis and vicinity: Am. Jour. Sci., 2d ser., vol. 3 pp. 119-120, 1847.
2. Remarks on *Melonites multipora*: Am. Jour. Sci., 2d ser., vol. 3, pp. 124-125, 1847.
3. Lower Carboniferous system as developed in southern Illinois: St. Louis Acad. Sci. Trans., vol. 2, pp. 188-190, 1862.

Erickson, Ralph O.

1. (and Brenner, L. G., and Wraight, J.). Dolomitic glades of east-central Missouri: Missouri Bot. Garden Annals, vol. 29, no. 2, pp. 89-101, 5 figs., incl. index map, April 1942.

Ethridge, Robert, Jr. Refer to Carpenter, P. H.

Evans, Charles.

1. Seventh annual report of the state mine inspectors of the State of Missouri for the year ending June 30, 1893: 201 pp., Jefferson City, Missouri, 1893.
2. Eighth annual report of the state mine inspectors of the State of Missouri for the year ending June 30, 1894: 289 pp., Jefferson City, Missouri, 1894.
3. Ninth annual report of the state mine inspectors of the State of Missouri for the year ending, June 30, 1895: 269 pp., Jefferson City, Missouri, 1896.

4. Tenth annual report of the state mine inspectors of the State of Missouri for the year ending June 30, 1896: Jefferson City, Missouri, 1896.
5. Eleventh annual report of the state mine inspectors of the State of Missouri for the year ending June 30, 1897: 326 pp., 3 maps, 1897, Jefferson City, Missouri, 1898.
6. Twelfth annual report of the state mine inspectors of the State of Missouri for the year ending June 30, 1898: 181 pp., Jefferson City, Missouri, 1898.
7. Thirteenth annual report of the state mine inspectors of the State of Missouri for the year ending June 30, 1899: 412 pp., Jefferson City, Missouri, 1900.
8. Fourteenth annual report of the state coal mine inspectors of the State of Missouri for the year ending June 30, 1900: 202 pp., Jefferson City, Missouri, 1900.
9. Fifteenth annual report of the State coal mine inspectors of the State of Missouri for the year 1901: 243 pp., Jefferson City, Missouri, 1902.
10. Sixteenth annual report of the state coal mine inspectors of the State of Missouri for the year 1902: 272 pp., 1 pl., Jefferson City, Missouri, 1903.
11. Seventeenth annual report of the coal mine inspectors of the State of Missouri for the year 1903: 295 pp., Jefferson City, Missouri, 1904.

Evans, Robert Edward.

1. Concentration of an oxidized lead ore from southeast Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 28 pp., il., tables, Rolla, Missouri, 1932.

Everett, O. Refer to Ulrich, E. O.

Faber, Charles L. Refer to Miller, S. A.

Fahrmer, L.

1. The geography of the Ashland region: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1928.

Farmer, R.

1. The conodonts of the Chouteau limestone: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1932.

Farnham, Frank Cecil.

1. (and Muilenberg, G. A., Reinoehl, C. O., and Grohskopf, J. G.). Geophysical prospecting: Missouri Bur. Geol. and Mines, Bienn. Rept. State Geologist, 1929-30, app. 3, pp. 146-151, 4 pls., 1931.
2. Some earth resistivity measurements in northwest Missouri (abstract): Missouri Acad. Sci. Proc. vol. 3, no. 4, p. 132, September 15, 1937.
3. A datum for magnetometer mapping (abstract): Missouri Acad. Sci. Proc. 1938, vol. 4, no. 6, pp. 167-168, March 15, 1939.
4. (and Vannostrand, R. G.). Some measurements of magnetic susceptibility of rocks (abstract): Missouri Acad. Sci. Proc. 1940, vol. 6, pp. 90-91, 1941.

Farnsworth, P. J.

1. When was the Mississippi River valley formed?: *Am. Geologist*, vol. 28, pp. 393-396, 1901.

Farrar, Willard.

1. Fuller's earth in southeast Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 52 pp., il., pls., maps, Rolla, Missouri, 1934.
2. (and Grenfell, D. S., and Allen, V. T.). The geology and bleaching clays of southeast Missouri: *Missouri Geol. Survey and Water Resources*, 58th Bienn. Rept. State Geologist, 1933-34, app. 1, pp. 1-35, 1935; Reprint, Missouri Resources Museum Mimeographed Bull., no. 21.
3. (and McManamy, L.). The geology of Stoddard County, Missouri: *Missouri Geol. Survey and Water Resources*, 59th Bienn. Rept. State Geologist, 1935-36; app. 6, 92 pp., 12 plates, 2 figs., including maps, 1937.

Farrington, Oliver C.

1. Handbook and catalogue of meteoric collection (Contains brief description of Butler, Mincy and Warrenton meteorites which are in the collection.): *Field Columbian Mus., Geol. Ser.*, vol. 1, 65 pp., Chicago, 1895.
2. Crystal forms of calcite from Joplin, Missouri: *Field Columbian Mus., Geol. Ser.*, vol. 1, no. 7, pp. 231-541, Chicago, 1900.

Fay, A. H.

1. (and Marinez, C. E.). Report on the Reed, Simson, and Kelley copper and iron banks of Phelps County, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1902.

Featherstonhaugh, G. W.

1. Geological report of examination made in 1834 of elevated country between the Missouri and Red Rivers (References are made to the geological features of Missouri.): U. S. 23d Congress, 2d sess., House Ex. Doc. 151, one vol., 97 pp., Washington, 1835; Notice, *Am. Jour. Sci.*, 1st ser., vol. 28, p. 379, 1835.
2. Report of a geological reconnaissance of Couteau de Prairie, etc.: (includes parts of northern Missouri): U. S. Congress, 2d sess., Senate Ex. Doc. 333, 168, pp., maps, Washington, 1936.
3. Excursion through slave states, from Washington on the Potomac to the frontier of Mexico (On pages 62-68 are described the iron and lead mines of Missouri.): One volume, 168 pp., New York, 1884.
4. Canoe voyage up the Minnay Sotor: London, 1847.

Fenix, Frank G.

1. Thirty-eighth annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri, for the year ending December 31, 1925, 84 pp., pls. 8, 1926.
2. Thirty-ninth annual report of the Bureau of Mines, inspection department of the State of Missouri, for the year ending December 31, 1926, 92 pp., 1 pl., 1 chart, 1927.

3. Fortieth annual report of the Bureau of Mines inspection department of the State of Missouri, year ending December 31, 1927, 92 pp., 1 pl., 1 chart, 1928.
4. Forty-first annual report of the Bureau of Mines, department of inspection of the State of Missouri, year ending December 31, 1928, 89 pp., 1 pl., 1929.
5. Forty-second annual report of the Bureau of Mines, department of inspection of the State of Missouri, year ending December 31, 1929, 101 pp., 3 pls., 1930.
6. Forty-third annual report of the Bureau of Mines, department of inspection of the State of Missouri, year ending December 31, 1930, 105 pp., 5 pls., 1931.
7. Forty-fourth annual report of the Bureau of Mines, department of inspection of the State of Missouri, year ending December 31, 1931, 95 pp., 1 pl., 1932.
8. Forty-fifth annual report of the Bureau of Mines, department of inspection of the State of Missouri, year ending December 31, 1932, 82 pp., 1933.

Fenneman, Nevin M.

1. Clay resources of the St. Louis district, Missouri: U. S. Geological Survey Bull. 315, pp. 315-321, 1907.
2. Stratigraphic work in the vicinity of East St. Louis: Illinois Geol. Survey Bull. 4, pp. 213-217, 1907.
3. Physiography of the St. Louis area: Illinois Geol. Survey Bull. 12, 83 pp., map, 1909.
4. Geology and mineral resources of the St. Louis quadrangle, Missouri-Illinois: U. S. Geol. Survey Bull. 438, 73 pp., map, 1911.
5. Physiography of eastern United States, 636 pp., New York and London, McGraw Hill Book Co., Inc., 1938.
6. Physical geography, and geology of United States (Includes some information on Missouri.): Encyclopedia Britannica, vol. 22.

Fenton, Carrol Lane.

1. (and Fenton, M. A.). Some Black River brachiopods from the Mississippi Valley: Iowa Acad. Sci. Proc. 1922, vol. 29, pp. 67-77, 2 pls., 1924 (?).
2. The stratigraphy and larger fossils of the Plattin formation in Ste. Genevieve County, Missouri: Am. Midland Naturalist, vol. 11, no. 2, pp. 86-96, March, 1928; nos. 3, 4, pp. 125-143, 7 pls., May-July, 1928.
3. Forms of *Strophomena* from Black River and Richmond formations: Am. Midland Naturalist, vol. 11, nos. 3, 4, pp. 144-159, 3 pls., May-July, 1928.

Fernald, R. H.

1. Producer-gas tests of Missouri coal: U. S. Geol. Survey Bull. 261, pp. 101, 102, 117, 1905.
2. Comparison of steam and producer-gas tests of Missouri coal: U. S. Geol. Survey Bull. 261, p. 119, 1905.
3. Producer-gas tests of Missouri coal: U. S. Geol. Survey Prof. Paper 48, pt. 3, pp. 1155-1168, 1906.

4. Recent development of the producer-gas power plant in Missouri:
U. S. Geol. Survey Bull. 416, pp. 12, 16, 71, 1909.

Feuchtwanger, Lewis.

1. Mineral resources of Missouri; mineralogical observations in the State of Missouri. *Hunt's Merchants' Mag.*, vol. 16, p. 177, New York, 1857.

Fieldner, Arno Carl.

1. (and Cooper, H. M., and Osgood, F. D.). Analyses of Missouri coals (analyses of mine samples, and description of samples): U. S. Bur. of Mines Tech. Paper 366, pp. 8-33, 1926.

Finch, Ruy Herbert.

1. The Missouri earthquake of April 9, 1917: *Seismol. Soc. America Bull.*, vol. 7, pp. 91-96, 1917; *Missouri Weather Rev.*, vol. 45, pp. 187-188, 1917.

Findlay, J. Ralph.

1. Lead and zinc ores of Missouri: *Eng. and Min. Jour.*, vol. 86, pp. 605-610, 1908.

Flint, F. R.

1. Earthquakes on the Mississippi; extracted from the travels of Mr. Flint: *Am. Jour. Sci.*, vol. 15, p. 366, 1829.

Flint, Richard F.

1. (and Ball, J. R.). Revision of the Silurian of southeastern Missouri: *Jour. Geology*, vol. 34, no. 3, pp. 248-256, April-May 1926; abstract, *Geol. Soc. America Bull.*, vol. 37, no. 1, p. 243, March 30, 1926.
2. Thrust faults in southeastern Missouri: *Am. Jour. Sci.*, 5th ser., vol. 12, pp. 37-40, 2 figs., July, 1926.
3. The geology of parts of Perry and Cape Girardeau counties, Missouri (abstract): *Chicago Univ. Abstracts of Theses, Sci. ser.*, vol. 3, pp. 221-224, April, 1927.
4. Parts of Perry and Cape Girardeau counties, including parts of Altenburg, Perryville, and Campbell Hill quadrangles: Unpublished paper in files of Missouri Geological Survey, Rolla, Missouri, 1925.
5. Ozark segment of Mississippi River: *Jour. Geol.*, vol. 49, no. 6, pp. 626-640, 4 figs., index maps, 1941.

Flowers, Rousseau Hayner.

1. Study of the Pseudorthoceratidae: *Paleontographica Americana*, vol. 2, no. 10, 214 pp., 9 pls., 22 figs., October 28, 1939.

Foerste, August Frederick. Refer also to Ulrich, E. O.

1. The Kimmswick and Plattin limestones of northeastern Missouri: *Dennison Univ. Bull., Sci. Lab. Jour.*, vol. 19, pp. 175-224, 3 pls., May, 1920.
2. Notes on American Paleozoic cephalopods: *Dennison Univ. Bull.*, vol. 24, pp. 193-267, 1924.

3. Notes on cephalopod genera; chiefly coiled Silurian forms: Dennison Univ. Bull., vol. 25, pp. 1-69, 1925.
4. Actinosiphonate, trochoceroïd, and other cephalopods: Dennison Univ. Bull., vol. 26, pp. 285-383, 1926.

Folger, Anthony. Refer also to Kansas Geol. Soc. Field Conferences.

1. The Missouri-Iowa field conference: Am. Assoc. Petroleum Geologists Bull., vol. 12, no. 2, pp. 201-211, February, 1928.

Foote, Warren M.

1. Notes on occurrence of leadhillite pseudomorphs at Granby, Missouri: Am. Jour. Sci., 3d ser., vol. 50, pp. 99-100, 1895.

Forbes, C. R. Refer also to McQueen, H. S.

1. Winning of Missouri diaspore, burley, and flint clays: Am. Ceramic Soc. Jour., vol. 11, no. 3, pp. 204-214, March, 1928.
2. Grading and sampling of Missouri burley and diaspore clay: Am. Ceramic Soc. Jour., vol. 14, no. 5, pp. 328-388, May, 1931.
3. Missouri—mining industry, past and present: Eng. and Min. Jour., vol. 142, no. 8, pt. 1, p. 138, August, 1941.

Ford, W. E.

1. Improvement in milling Missouri zinc ores: Eng. and Min. Jour., vol. 84, no. 19, pp. 868-870, November 9, 1907.

Forrester, Virginia.

1. The geography of the trade territory of the St. Louis-San Francisco railway: Washington Univ., unpublished thesis, 78 pp., 30 figs., St. Louis, Missouri, 1932.

Foster, Paul Woodward.

1. Evidence of rock-plains in southeastern Missouri (abstract): Oklahoma Univ. Bull. 888, new ser., Abstracts of Theses Issue, p. 92, January 15, 1943.

Foster, Vellora Meek.

1. A geologic section along the Mississippi River bluff from President Street, St. Louis, Missouri to the Meramec River: Washington University, unpublished thesis, 156 pp., front., 4 figs., 24 pls., maps in pockets, St. Louis, Missouri, 1927.

Fowke, Gerard.

1. Superficial deposits along the Mississippi: Ohio State Acad. Sci. Proc., vol. 4, (14 Ann. Rept.), pp. 349-352, 1906.
2. Surface deposits along the Mississippi between the Missouri and Ohio Rivers: Missouri Hist. Soc. Col. 3. no. 1, pp. 31-52, 1908.

Fowler, George Malcomb.

1. (and Lyden, J. P.). The ore deposits of the Tri-State district (Missouri-Kansas-Oklahoma) (with discussion): Am. Inst. Min. Met. Eng. Tech. Pub. 446, 46 pp., 16 figs., January, 1932; Trans. vol. 102, pp. 206-251, 16 figs., 1932; abstract, Mining and Metallurgy, vol. 12, no. 297, p. 401, September, 1931.

2. (with Lyden, J. P.). The ore deposits of the Tri-State district (discussion): *Econ. Geology*, vol. 28, no. 1, pp. 75-81, January-February, 1933.
3. Oil and oil structures in Oklahoma-Kansas zinc-lead mining field: *Am. Assoc. Petroleum Geologists Bull.*, vol. 17, no. 12, pp. 1436-1445, 1 fig., December, 1933.
4. (and Lyden, J. P., Gregory, F. E., and Agar, W. M.). Chertification in the Tri-State (Oklahoma-Kansas-Missouri) mining district: *Am. Inst. Min. Met. Eng. Tech. Pub.* no. 532, 50 pp., 32 figs., 1934.
5. (and Lyden, J. P.). The Miami-Picher zinc-lead district: *Econ. Geology*, vol. 29, no. 4, pp. 390-396, June-July, 1934.
6. Geology of the Tri-State district (abstract with discussion): *Tulsa Geol. Soc. Digest*, pp. 43-47, 1935.
7. (and Lyden, J. P., and Gregory, F. E., and Agar, W. M.). Chertification in the Tri-State (Oklahoma-Kansas-Missouri) district (with discussion): *Am. Inst. Min. Met. Eng. Trans.*, vol. 115, *Mining Geology*, pp. 106-163, 32 figs., incl. sketch map, 1935; abstract, *Year Book*, pp. 82-83, 1935.
8. (and Lyden, J. P.). The ore deposits of the Tri-State district: *Econ. Geology*, vol. 30, no. 5, pp. 565-575, August, 1935.
9. Structural control of ore deposits in the Tri-State zinc and lead district: *Eng. and Min. Jour.*, vol. 139, no. 9, pp. 46-51, 10 figs., incl. index maps, September, 1938.
- 9A. Ore search in the Tri-State District: *Mining Congress Jour.*, vol. 28, no. 1, p. 26, 1942.
10. Ore deposits in the Tri-State zinc and lead district: Ore deposits as related to structural features, Newhouse, W. D., ed., pp. 206-211, 9 figs., incl. index and isopach maps, 1942.
11. Tri-State geology: *Eng. and Min. Jour.*, vol. 144, no. 11, pp. 73-79, 7 figs., incl. index and isopach maps, November, 1943.
12. (and Illidge, R. E., and O'Harra, B. M.). Developing, mining, and smelting the ores of the Tri-State (Missouri-Kansas-Oklahoma) district: *Am. Inst. Min. Met. Engr. Trans.*, vol. 153, pp. 82-97, 1943.

Francis, David R.

1. Missouri's rich resources, geological surveys and representation at the World's Fair, Chicago, 1892-1893: *Inter-State Mining Convention Proc.*, pp. 29-32, December, 1891.

Frank, Albert. Refer to Heinrich, R. R.

Frank, Albert J.

1. Petrology of the Pennsylvanian cycles of the St. Louis area: *Jour. Sedimentary Petrology*, vol. 14, no. 1, p. 29-38, 8 tables, April, 1944.

Frazer, Persifor, Jr.

1. Remarks on Pilot Knob, Iron Mountain and Mine La Motte districts: *Philadelphia Acad. Nat. Sci. Proc.*, 1874, pp. 85-86, 1874.

Freeman, C. A.

1. New developments in ceramic engineering: *Missouri Acad. Sci. Proc.*, vol. 4, no. 6, pp. 141-143, March, 1939.

Frossard, R. L.

1. The geology of the Nixa area: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1942.

Fuchs, Edmund.

1. (and de Launay, L.). *Traite des gites mineraux et metalliferes* (References made to the occurrence of various metals in Missouri.): Two vols., Paris, 1893.

Fuller, Myron Leslie.

1. Notes on certain large springs of the Ozark region, Missouri and Arkansas: *U. S. Geol. Survey Water Supply Paper* 145, pp. 207-210, 1905.
2. Cause and periods of earthquake in the New Madrid area, Missouri and Arkansas (abstract): *Science*, new ser., vol. 21, pp. 349-350, 1905.
3. Audubon's account of the New Madrid earthquake: *Science*, new ser., vol. 21, pp. 748-749, 1905.
4. Our greatest earthquakes: *Popular Science Monthly*, vol. 69, pp. 76-86, New York, 1906.
5. Comparative intensities of the New Madrid, Charleston, and San Francisco earthquake (abstract): *Science*, new ser., vol. 23, pp. 917-918, 1906.
6. The New Madrid earthquake: *U. S. Geol. Survey Bull.* 494, 119 pp., map, 1912; Abstract (by Brooks, A. H.), *Washington Acad. Sci. Jour.*, vol. 2, pp. 350-351, 1912.

Furnish, W. M. Refer to Miller, A. K., and Ulrich, E. O.

Gage, James R.

1. On the occurrence of iron ores in Missouri: *St. Louis Acad. Sci. Trans.*, vol. 3, pp. 181-192, 1873.
2. Lead mines, southeast Missouri: *Missouri Geol. Survey Rept.* 1873-74, pp. 602-637, 1874.
3. On the occurrence of the lead ores in Missouri: *Eng. and Min. Jour.*, vol. 18, pp. 194, 209-210, 1874.
4. On the occurrence of the lead ores in Missouri: *Am. Inst. Min. Eng. Trans.*, vol. 3, pp. 116-125, 1875.
5. The Ste. Genevieve County (Missouri) copper mines: *Western Rev. Sci.*, vol. 1, pp. 603-605, Kansas City, 1877.

Gale, Arthur S. Refer to Croneis, C. G.

Gallagher, R. T.

1. Mineral content of the Bevier coal seam: *Mines, Mag.*, vol. 30, no. 11, pp. 586-590, 611-612, 12 figs., Denver, November 1940; Univ. of Missouri thesis, Columbia, Missouri, 1938.

Gallaher, John A.

1. Biennial report of the Bureau of Geology and Mines: Missouri Bur. Geol. and Mines, 68 pp., Jefferson City, Missouri, 1898.
2. Preliminary report on the structural and economic geology of Missouri: Missouri Bur. Geol. and Mines, 259 pp., Jefferson City, Missouri, 1900.
3. New Year announcement of the Bureau of Geology and Mines of Missouri: 27 pp., Jefferson City, Missouri, 1900.
4. Geology of Missouri: Encyclopedia of the History of Missouri, 3, pp. 31-41, New York, 1901.

Gallaher, Leo.

1. Biennial report of the State Geologist: Missouri Bur. Geol. and Mines, 55 pp., Jefferson City, Missouri, 1901.

Gallaher, Philip.

1. Metallurgic industries of south Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1884.

Gannett, Henry.

1. Dictionary of altitudes in United States (Elevations in the state are given.): U. S. Geol. Survey Bull. 5, 325 pp., 1884.
2. Dictionary of altitudes in United States (List of elevations in Missouri is included.): U. S. Geol. Survey Bull. 76, 273 pp., 1891.
3. Physiographic types: U. S. Geol. Survey Top. Atlas of U. S., folio no. 2, Marshall sheet, Missouri, 1900.
4. A dictionary of altitudes in the United States, fourth edition: U. S. Geol. Survey Bull. 274, 1072 pp., 1906.

Gardner, J. W.

1. The Northview formation: Its character and extent in Webster County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1935.

Garlichs, Hermann.

1. The metallurgy of lead ores in the lower Mississippi Valley: Am. Inst. Min. Eng. Trans., vol. 57, pp. 610-616, 1917.

Garrels, Robert M.

1. Valley type lead-zinc deposits and the problems of mineral zoning: Econ. Geology, vol. 36, pp. 729-744, 1941.

Garrison, Frank Lynwood.

1. The Joplin zinc district: Mines and Minerals, vol. 20, pp. 462-463, 1900.
2. Notes on minerals (Includes Joplin zinc blends.): Philadelphia Acad. Sci. Proc., vol. 59, pp. 445-446, 1907.
3. Zinc and lead deposits of southwestern Missouri: Mining and Science Press, San Francisco, 1908.

Garvens, Oscar.

1. Iron ores and associates at Buckland's Bank (Phelps Co.): Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1876.

Geis, Harold Loreny.

1. Recent and fossil Pedicellariae: Jour. Paleontology vol. 10, no. 6, pp. 427-448, 4 pls., 1 fig., September, 1936; abstract, Geol. Soc. America Proc. 1933, p. 354, June, 1934.

Genthy, F. A.

1. Picroparmacolite from Joplin, Missouri: Am. Jour. Sci. 3d ser., vol. 40, pp. 204-205, 1890.

George, P. W.

1. Experiments with Eötvös torsion balance in the Tri-State zinc and lead district: Am. Inst. Min. Met. Eng. Trans. vol. 81, Geophysical Prospecting, pp. 561-571, 6 figs., 1929.

Gibb, Frank W.

1. The metallurgic treatment of lead ores as carried on in southwest Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1882.

Giles, A. W.

1. Boone Chert: Geol. Soc. America Bull., vol. 46, no. 12, pp. 1815-1867, 1935.
2. Structural features of the Mississippi Valley region and their relation to mineralization: Geol. Soc. America Special Papers no. 24, pp. 39-49, 1939.

Gillerman, Elliot.

1. The relation of the Reeds Spring to the Fern Glen formation (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, pp. 121-122, 1937.
2. Early Osage formations of eastern Missouri: Washington University, unpublished thesis, 126 pp., 28 figs., St. Louis, Missouri, 1937.

Gilmore, Charles.

1. (and Stewart, D. R.). A new sauropod dinosaur from the upper Cretaceous of Missouri: Jour. Paleontology, vol. 19, no. 1, pp. 23-29, January, 1945.

Gilmore, Louise.

1. The geographic factors in the distribution of the population of the St. Louis suburban zone: Washington University, unpublished thesis, 54 pp., front., 14 figs., 1 table, St. Louis, Missouri, 1927.

Girty, George Herbert.

1. On some growth stages in *Naticopsis altonensis* McChesney (specimens from Henry County): Am. Jour. Sci., 4th ser., vol. 34, pp. 338-339, pl. 1, 1912.
- 1A. Fauna of the so-called Boone chert near Batesville, Arkansas: U. S. Geol. Survey Bull. 595, 45 pp., 1915; Abstract, Washington Acad. Sci. Jour., vol. 5, pp. 604-605, 1915.
- 1B. Fauna of the Boone limestone at St. Joe, Arkansas: U. S. Geol. Survey Bull. 598, 45 pp., 1915.

- 1C. Fauna of the Batesville sandstone of northern Arkansas: U. S. Geol. Survey Bull. 593, 170 pp., 1915.
2. Invertebrate paleontology (of the Pennsylvanian of Missouri): Missouri Bur. Geol. and Mines, 2d ser., vol. 13, pp. 263-376, 1915.
3. New Carboniferous invertebrates, pt. 1: Washington Acad. Sci. Jour., vol. 19, no. 7, pp. 135-142, 1 pl., April 4, 1929; pt. 2, no. 18, pp. 406-414, 1 pl., November 4, 1929; pt. 3, vol. 21, no. 16, pp. 390-397, 1 pl., October 4, 1931; pt. 4, vol. 24, no. 6, pp. 249-266, 29 figs., June 15, 1934.
4. An unrecorded structure in certain semi-reticulate *Producti*: Jour. Paleontology, vol. 9, no. 1, pp. 7-9, 4 figs., January, 1935.
5. *Setigerella* and *Worthenella*, two new subgenera of *Productus*: Washington Acad. Sci. Jour., vol. 28, no. 10, pp. 433-443, 7 figs., October 15, 1938.

Glassman, D.

1. The stratigraphy of the Chouteau limestone of Boone County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1925.

Gleason, Charles D.

1. Rare minerals in Missouri: Compass, vol. 11, no. 4, pp. 132-134, 1 fig., May, 1931.
2. Underground waters in St. Louis County and city of St. Louis, Missouri: Missouri Geol. Survey and Water Resources, Bienn. Rept. of State Geologist 1933-34, app. 5, 24 pp., 5 pls., 1 fig., 1935.

Glines, A. L.

1. The insoluble residues of the Pennsylvanian limestone of Boone County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1926.

Gluck, Leo.

1. (and Winslow, A.). Notes on mining thin coal seams in Missouri and Kansas: Missouri Geol. Survey Rept., vol. 1, pp. 173-186, 1891.

Goddard, P. B.

1. Remarks on *Missourium kochii*: Philadelphia Acad. Nat. Sci. Proc., vol. 1, pp. 115-116, 1841.

Goesse, John B.

1. (and Ruppel, G. E.). Seismology in St. Louis University: St. Louis Univ. Bull., vol. 7, no. 5, 53 pp., 1911.

Goldich, Samuel S. Refer also to Muilenburg, G. A., and Tolman, C.

1. (and Muilenburg G. A.). Labradorite-hyper-oranite: Am. Jour. Sci., vol. 237, no. 2, pp. 130-134, February, 1939.

Gollhofer, Rolla Linz.

1. The Ste. Genevieve outliers of St. Louis County, Missouri: Washington University, unpublished thesis, 51 pp., 18 figs., St. Louis, Missouri, 1933.

Gordon, Charles Henry.

1. Brecciated character of St. Louis limestone: *Am. Naturalist*, vol. 24, pp. 305-311, 1890.
2. Buried river channels in southeastern Iowa (They are shown to extend also into northeastern Missouri.): *Iowa Geol. Survey*, vol. 3, pp. 237-255, Des Moines, Iowa, 1894.
3. Report on the Bevier sheet, including portions of Macon, Randolph and Chariton Counties: *Missouri Geol. Survey*, vol. 9, Sheet Report no. 2, 85 pp., geologic map, Jefferson City, Missouri, 1896.

Gottschalk, V. H. Refer to Buehler, H. A., and Cox, G. H.

Gould, Charles Newton.

1. Geology of Jacobs Cavern, McDonald Co., Missouri: *Phillips Academy, Dept. Archaeology Bull.*, vol. 1, pp. 9-12, Andover, Massachusetts, 1904.
2. Crystalline rocks of the plains (with discussion by R. S. Knapper): *Geol. Soc. America Bull.*, vol. 34, no. 3, pp. 541-560, 3 figs., September 30, 1923.

Gratacap, Louis Pope.

1. Note on an interesting specimen of calcite from Joplin, Missouri: *Am. Museum Nat. Hist. Bull.*, vol. 13, pp. 95-97, 1900.

Graton, L. C.

1. (and Harcourt, G. A.). Spectrographic evidence on origin of ores of the Mississippi Valley type: *Econ. Geology*, vol. 30, pp. 800-824, 1935.

Graves, Howard Bradley, Jr.

1. Joint systems of the St. Francois Mountains: *Washington University*, unpublished thesis, 73 pp., 62 figs., St. Louis, Missouri, 1934.
2. The pre-Cambrian structure of Missouri: *St. Louis Acad. Sci. Trans.*, vol. 29, no. 5, pp. 111-164, 9 figs. incl. geol. sketch maps, January 31, 1938.

Grawe, Oliver R.

1. *Septaria* from the Pennsylvanian shale, vicinity of St. Louis, Missouri: *Washington Univ. Studies*, vol. 11, no. 1, pp. 65-69, 1 pl., 1923.
2. Some breccias of the St. Louis formation in the St. Louis, Missouri region: *Washington Univ. Studies*, vol. 13, Sci. ser., no. 1, pp. 45-62, 6 pls., 1925.
3. (and Cullison, J. S.). A study of sandstone members of the Jefferson City and Cotter formations at Rolla, Missouri: *Jour. Geology*, vol. 39, no. 4, pp. 305-330, 7 figs., May-June, 1931; abstract, *Geol. Soc. America Bull.* vol. 42, no. 1, p. 332, March 31, 1931.
4. Commercial iron sulphide deposits of the northern Ozark plateau: *Geol. Soc. America Proc.* 1935; p. 437, June, 1936.

5. Iron sulphide ores of northern Ozarks (abstract): Pan-Am. Geologist, vol. 65, no. 2, p. 159, March 1936.
6. A mineral thermometer: Univ. of Missouri, School of Mines and Met. Bull., 8 pp., and chart, June, 1937.
7. Manganese deposits of Missouri: Missouri Geol. Survey and Water Resources, 62d Bienn. Rept. State Geologist, 1941-42, app. 6, pp., 2 pls., 3 figs., incl. maps, 1943.
8. Pyrites deposits of Missouri: Missouri Geol. Survey and Water Resources, vol. 30, 1945.

Gray, H. O. Refer to Netzeband, W. F.

Gray, S. G.

1. The Spiriferidae of the Chouteau limestone: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1927.

Greason, Arthur.

1. Copper ores and deposits of Shannon County, Missouri: Univ. of Missouri, School of Mines and Met. unpublished thesis, Rolla, Missouri, 1876.

Greaves-Walker, A. F.

1. Technical problems in ceramics: Mineral Indus. Conf. Proc., Rolla, Missouri, 1938, pp. 38-43, Rolla, Missouri, 1940.

Green, Jacob.

1. New trilobite *Asaphus polypleurus*: Am. Jour. Sci., 1st ser., vol. 34, p. 380, 1838.

Greene, Frank Cook. Refer also to Clair, J. R.; Grohskopf, J. G.; Hinds, H.; and McQueen, H. S.

1. The coal resources of a part of northeastern Missouri: U. S. Geol. Survey Bull. 541, pp. 223-242, pl. 12, 1914.
2. Preliminary sketch of the history of the lower Missouri: Geol. Soc. America Bull., vol. 32, no. 1, pp. 83-87, March, 1921.
3. (and Pond, W. F.). The geology of Vernon County: Missouri Bur. Geol. and Mines, 2d ser., vol. 19, 152 pp., 14 pls., 14 figs., maps, 1926.
4. Oil and gas pools of western Missouri: Missouri Bur. Geol. and Mines, 57th Bienn. Rept. State Geologist, 1931-32, app. 2, 68 pp., 1933.
5. Oil and gas possibilities of the Savannah area, Andrew Co., Missouri: Missouri Bur. Geol. and Mines, 58th Bienn. Rept. State Geologist, 1933-34, app. 2, 26 pp. 2 pls, incl. map, 1935.
6. Oil and gas developments in Missouri in 1933-34: Missouri Bur. Geology and Mines, 58th Bienn. Rept. State Geologist, 1933-34, app. 3, 21 pp., 1935.
7. (and Trowbridge, R. M.). Pre-glacial drainage pattern of north-west Missouri: Missouri Bur. Geol. and Mines, 58th Bienn. Rept. State Geologist, 1933-34, app. 7, 7 pp., 1935.
8. Oil and gas development in Missouri in 1935-36: Missouri Geol. Survey and Water Resources, 59th Bienn. Report State Geologist, 1935-36, app. 8, pp. 29-34, 1937.

9. (and Clair, J. R. and McQueen, H. S.). Oil and gas possibilities in the Fillmore area, Andrew County and the Gower area, Clinton and Buchanan Counties: Missouri Geol. Survey and Water Resources, 59th Bienn. Rept. State Geologist, 1935-36, app. 8, 34 pp., 1937.
 10. (and McQueen, H. S.). The Polo gas field: Missouri Geol. Survey and Water Resources, 62d Rept. State Geologist, 1941-42, app. 1, 24, pp., 5 figs., incl. maps, 1943.
 11. The Lexington coal in northwestern Missouri: Missouri Geol. Survey and Water Resources, 62d Bienn. Rept. State Geologist, 1941-42, app. 5, 12 pp., 1943.
- Greger, Darling Kenneth. Refer also to Born, K. E., and Branson, E. B.
1. Publications of the Missouri Geological Survey: New Year announcement of the Missouri Bur. Geol. and Mines, pp. 20-27, Jefferson City, Missouri, January, 1900.
 2. Publications of the Missouri Geological Survey: Bien. Rept. State Geologist, 1899-1900, pp. 46, 1901.
 3. List of publications and index (of the Missouri Geological Survey): Missouri Bur. Geol. and Mines, Bienn. Rept. State Geologist, 1901-02, p. 63, Jefferson City, Missouri, 1903.
 4. The distribution and synonymy of *Ptychospira sexplicata* White and Whitfield: Am. Geologist, vol. 23, p. 15, January, 1904.
 5. On the genus *Rhynchopora* King, with notice of a new species: Am. Geologist, vol. 23, p. 297, May, 1904.
 6. A new Devonian brachiopod retaining the original color markings: Am. Jour. Sci., 4th ser., vol. 25, p. 313, April, 1908.
 7. The Devonian of central Missouri: Am. Jour. Sci., 4th ser., vol. 27, p. 374, May, 1909.
 8. Some rare and imperfectly known brachiopods from the Mississippian: Am. Jour. Sci., 4th ser., vol. 29, p. 71, January, 1910.
 9. Devonian stratigraphy: Univ. of Missouri Bull., vol. 15, no. 31, p. 69, November, 1914.
 10. On the retention of the original color ornamentation in fossil brachiopods: The Nautilus, vol. 28, no. 8, p. 93, 1914.
 11. Garland Carr Broadhead, with a bibliography: Missouri Hist. Rev., p. 57, January, 1915.
 12. (and Branson, E. B.). Devonian of central Missouri (abstract): Geol. Soc. America Bull., vol. 26, no. 1, p. 112, March, 1915.
 13. Pleistocene Mollusca from Callaway County, Missouri: The Nautilus, vol. 30, no. 6, p. 64, October, 1916.
 14. A color-marked *Euconispira* from the Pennsylvanian of Missouri and a list of references to coloration in fossil shells: The Nautilus, vol. 30, no. 10, p. 114, February, 1917.
 15. Devonian of central Missouri; Fauna of the Cooper limestone (abstract): Geol. Soc. America Bull., vol. 28, no. 1, p. 209, March, 1917.
 16. The invertebrate fauna of the Grassy Creek shale of Missouri (abstract): Geol. Soc. America Bull., vol. 29, no. 1, p. 95, 1918.
 17. The Devonian of central Missouri (II): Am. Jour. Sci., 4th ser., vol. 49, p. 265, April, 1920.
 18. The Devonian of central Missouri (III); The Cooper limestone: Am. Jour. Sci., 4th ser., vol. 50, p. 20, July, 1920.

19. North American species of the brachiopod *Etheridgina*: Geol. Mag., vol. 57, no. 678, p. 535-538, 1 pl., December, 1920.
20. *Spirifer organensis* Shumard: Am. Midland Naturalist, vol. 13, no. 3, pp. 130-132, 1 pl., May, 1932.
21. The Pleistocene Mollusca of Missouri: Am. Midland Naturalist, vol. 15, no. 1, pp. 58-61, January, 1933.
22. *Throopella typa*, a new Devonian scaphopod: Geol. Mag., vol. 70, no. 830, p. 373-374, August, 1933.
23. Bibliographic index of North American species of the *Eublastoidea*: St. Louis Acad. Sci. Trans., vol. 28, no. 3, pp. 119-181, April, 1934.
24. Inarticulate brachiopods from the Grassy Creek shale of Pike County, Missouri: Am. Midland Naturalist, vol. 16, no. 1, pp. 110-114, 14 figs., January, 1935.
25. Benjamin Franklin Shumard, M. D. (Biography): St. Louis Acad. Sci. Bull., vol. 1, no. 2, p. 13, February, 1935.
26. Hiram Augustus Prout, M. D. (Biography and Bibliography): St. Louis Acad. Sci. Bull., vol. 1, no. 8, p. 59-61, December, 1935.
27. (and Born, K. E.). Stratigraphy and fauna of the Fernvale formation: Washington Univ. Studies, Contributions in Geology, new ser., no. 9, pp. 67-77, 2 pls., 1 fig., February, 1936.
28. On the occurrence of the genus *Gruenewaldtia* in the Devonian of central Missouri: Washington Univ. Studies, Contributions in Geology, new ser., no. 9, p. 93-97, 1936.
29. *Atrypae* of the central Missouri Devonian: St. Louis Acad. Sci. Trans., vol. 29, no. 2, pp. 43-53, 3 pls., July 1, 1936.
30. Meramecian Blastoidea from the vicinity of St. Louis, Missouri (abstract): Missouri Acad. Sci. Proc., vol. 4, no. 6, p. 166, March, 1939.

Gregory, Clay.

1. Report on the Herald Mine, Joplin, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1910.

Gregory, F. E. Refer to Fowler, G. M.

Grenfell, Donald S. Refer also to Smith, A. F.

1. Study of the bleaching earths: Missouri Geol. Survey and Water Resources, 58th Bienn. Rept. State Geologist, 1933-34, app. 1, pp. 36-71, 2 figs., 1 pl., 1935.

Griffith, Arnold.

1. Forty-sixth annual report of the department of mines and mining for the fiscal year 1933, 78 pp., Jefferson City, Missouri, 1933.
2. Forty-seventh annual report of the department of mines and mining for the fiscal year 1934, 76 pp., Jefferson City, Missouri, 1935.
3. Forty-eighth annual report of the department of mines and mining for the fiscal year 1935, 80 pp., Jefferson City, Missouri, 1936.
4. Forty-ninth annual report of the department of mines and mining for the fiscal year 1936, 80 pp., Jefferson City, Missouri, 1937.
5. Fiftieth annual report of the department of mines and mining for the fiscal year 1937, 90 pp., Jefferson City, Missouri, 1938.

6. Fifty-first annual report of the department of mines and mining for the fiscal years 1938, 93 pp., 5 pls., Jefferson City, Missouri, 1939.
7. Fifty-second annual report of the department of mines and mining for the fiscal year 1939, 82 pp., Jefferson City, Missouri, 1940.

Griffith, William.

1. A Missouri coal field: Eng. and Min. Jour., vol. 77, no. 14, pp. 564-565, April 7, 1904.

Griggs, R. L.

1. Geology of the Bachelor quadrangle, Callaway, Co., Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Grimsley, George Perry.

1. The Baltimore & Ohio railroad: Internat. Geol. Cong., 16, United States, 1933, Guidebook 30, Excursions A-2, A-6, C-1, C-2, C-3, C-4, 79 pp., 14 figs., (incl. maps), 17 pls. (incl. 7 geol. maps in separate folders), 1933.

Grinstead, L. R.

1. Huge Keokuk (Missouri) quartz geode: Mineralogist, vol. 12, no. 4, p. 110, 1 fig., April, 1944.

Grohskopf, John G. Refer also to Carmody, R. A.; Farnham, F. C.; and McQueen, H. S.

1. (and Reinoehl, C. O.). Magnetic surveys: Missouri Bur. Geology and Mines, 57th Bienn. Rept. State Geologist, 1931-32, app. 4, 20 pp., 3 pls. incl. map, 1933.
2. (and Hundhausen, Mary). Occurrence of dickite and fluorite in the Cambrian and Ordovician of Perry County, Missouri: Missouri Geological Survey and Water Resources, 59th Bienn. Rept. State Geologist, 1935-36, app. 3, 13 pp., 2 figs., 2 plates, 1937.
3. (and Hinchey, N. S., and Greene, F. C.). The subsurface geology of northeastern Missouri: Missouri Geol. Survey and Water Resources, 60th Bienn. Rept. State Geologist, 1937-38, app. 1, 100 pp., 3 plates, 3 figs., incl. maps and sections, 1939.
4. (and Hinchey, N. S.). An Ordovician outcrop in Saline County, (Missouri): Missouri Acad. Sci. Proc., vol. 4, no. 6, p. 164, March, 1939.
5. Geologic cross-section Dupo, Illinois to Hannibal, Missouri: Kansas Geol. Soc. Guidebook, 15th Ann. Field Conf., app. p. 48, 1 pl., 1941.
6. (and Clark, Edward L., and Ellison, Samuel). The Fortune, a new Devonian formation in southwestern Missouri: Missouri Geol. Survey and Water Resources, 62d Bienn. Rept. State Geologist, 1941-42, app. 4, 17 pp., 2 pls., index map, 1943.

Grove, Brandon Hambricht. Refer also to Ball, J. R.

1. Studies in Paleozoic corals; pt. 3, A revision of some Mississippian zaphrentids: Am. Midland Naturalist, vol. 16, no. 3, pp. 337-378, 6 pls., 4 figs., May, 1935.

Gruner, Thayer M.

1. The heavy accessory minerals of the Devonian sandstones of southern Missouri and southwestern Illinois: Washington University, unpublished thesis, 159 pp., 21 figs., St. Louis, Missouri, 1941.
2. The heavy minerals of the Devonian sands in southeast Missouri and southwest Illinois (abstract): *Missouri Acad. Sci. Proc.*, vol. 7, p. 109, 1941.

Guess, H. A.

1. Mining and milling methods in the southeast Missouri disseminated-lead district: *Am. Inst. Min. Eng. Trans.*, vol. 48, pp. 33-54, 1914.

Gunnell, Frank H.

1. Mississippian and Pennsylvanian conodonts from Missouri (abstract): *Geol. Soc. America Bull.*, vol. 42, no. 1, p. 331, March 21, 1931; *Pan-Am. Geologist*, vol. 55, no. 3, pp. 239-240, April, 1931.
2. Conodonts from the Fort Scott limestone of Missouri: *Jour. Paleontology*, vol. 5, no. 3, pp. 244-252, 1 pl., September, 1931.
- 2A. Pennsylvanian conodonts (abstracts): *Geol. Soc. America Bull.*, vol. 43, p. 282, 1932; *Pan-Am. Geologist*, vol. 57, p. 159, 1932.
3. Conodonts and fish remains from the Cherokee, Kansas City, and Wabaunsee groups of Missouri and Kansas: *Jour. Paleontology*, vol. 7, no. 3, pp. 261-297, 3 pls., September 1933.

Gurley, William Frank Eugene. Refer also to Miller, S. A.

1. New Carboniferous fossils: *Bull.* 1, 9 pp., September 24, 1883. (Priv. Pub.).
2. New Carboniferous fossils: *Bull.* 2, 12 pp., (Danville, Illinois), February 25, 1884. (Priv. Pub.).

Gwynn, J. K.

1. Minerals and mining, southwest Missouri: Prepared and published by the Southwest Missouri Immigration Soc., pp. 15-18, St. Louis, Missouri, 1888.

Haberman, Marie.

1. Popular review of ceramics history: *Missouri Resources Museum Mimeograph Bull.*, no. 14.
2. Part 1. The fascinating story of ceramics; "Tiles" 2. Modern tile roof enhances architectural style; 3. Mexican and Peruvian decorative tiles; 4. Chinese and Egyptian roof decorative tiles and porcelains; 5. New splendors added to an old art in tile; also with terra cotta: *Missouri Resources Museum Mimeograph Bull.*, no. 15.
3. The fascinating story of ceramics—"Sewer pipe, drain tile, etc.": *Missouri Resources Museum Mimeograph Bull.*, no. 19.

Hager, Albert David.

1. Annual report of the State Geologist of Missouri to the General Assembly (brief discussion of coal, iron, lead, zinc, nickel, cobalt, silver, tin, copper, and other mineral deposits of the State and statistics of production): pp. 21-43, 1871.

Hager, Dorsey.

1. Recent oil explorations in Iowa and Missouri: Pan-Am. Geologist, vol. 72, no. 3, pp. 186-192, 1 pl., geol. sketch map, October, 1939.

Hall, C. W.

1. Bituminous sandstone area of southwest Missouri: Eng. and Min. Jour., vol. 118, pp. 1011-1012, December, 1924.

Hall, James.

1. Note upon geology of western states (general remarks on the correlation of the rocks of the Mississippi Valley): Am. Jour. Sci., 1st ser., vol. 42, pp. 51-63, 1842.
2. Notes explanatory of a section from Cleveland, Ohio, to the Mississippi River, in the southwest direction, with remarks upon identity of western formations with those of New York (incidental references to the geology of Missouri): Assoc. Am. Geologists and Naturalists Trans., pp. 267-293, Boston, 1843.
- 2A. On the geographical distribution of fossils in the older rocks of the United States: Am. Jour. Sci., vol. 45, pp. 137-160, 1843.
- 2B. On the parallelism of the Paleozoic deposits of North America, with those of Europe (translation): Am. Jour. Sci., 2d ser., vol. 5, pp. 176-183, 259-270, 1848; vol. 7, pp. 45-51, 218-231, 1848. Translated from Edouard de Verneuil, Soc. Geol. France, vol. 4, pp. 646-710.
- 2C. Notes explanatory of a section from Cleveland, Ohio to the Mississippi River, in a southwest direction; with remarks upon the identity of the western formations with those of New York: Assoc. Am. Geol. and Naturalists Rept., pp. 267-293, 1848.
3. Observations on geology and paleontology of country traversed by expedition, and notes upon some of the fossils collected on the route. Stansbury, Howard, exploration and survey of valley of Great Salt Lake of Utah (Fossils are described from Missouri.): U. S. 32d Cong. special session, Senate Ex. Doc. 3, app. E., pp. 399-414, Washington, 1853.
4. Observations on Carboniferous limestone of boundary survey collections, and its relations with Carboniferous limestones of Mississippi Valley (incidental references to Missouri): United States and Mexican Boundary Survey, vol. 1, pt. 2, pp. 122-125, 1857; U. S. 34th Cong., 1st sess. Senate Ex. Doc. 108; House Ex. Doc. 135, vol. 1, pt. 2, pp. 101-140, 1857.
5. Observations upon Carboniferous limestone of Mississippi Valley (Classification of the rocks is given.): Am. Jour. Sci., 2d ser., vol. 23, pp. 187-203, 1857; Am. Assoc. Adv. Sci. Proc., vol. 10, pt. 2, pp. 51-69, 1857; Mining Magazine, vol. 9, pp. 529-542, New York, 1857.
6. Remarks upon genus *Archimedes* or *Fenestella* from Carboniferous limestones of Mississippi Valley: Am. Assoc. Adv. Sci. Proc., vol. 10, pt. 2, pp. 51-69, 1857; Am. Jour. Sci., 2d ser., vol. 23, pp. 203-204, 1857.

7. Report of Geological Survey of State of Iowa (There are numerous references to the geology of Missouri in accounts of the Che-mung group, Burlington limestone, and Coal Measures.): Iowa Geol. Survey vol. 1, 728 pp., Albany, New York, 1859.
8. Paleontology of New York (incidental references to the upper Si-lurian formations of Missouri): New York Nat. Hist., pt. 6, vol. 3, p. 29, Albany, New York, 1859.
- 8A. Description of new species of Crinoidea and other fossils from the Carboniferous rocks of the Mississippi Valley: Boston Soc. Nat. Hist. Jour., vol. 7, pp. 261-328, 1861.
9. Supplementary note on Potsdam sandstone (In "contribution to Paleontology" the magnesian limestones of Missouri are con-sidered.): New York Univ. 16th Ann. Reg. Rept., pp. 210-220, 1863.
10. Descriptions of new species of fossils from Carboniferous lime-stones of Indiana and Illinois (Missouri localities mentioned): Albany Inst. Trans., vol. 4, pp. 1-36, Albany, New York, 1864.
11. *Newberria*, a new genus of brachiopod (One of Swallow's species in maps of 1860 is described.): New York State Geologist Ann. Rept., vol. 10, pp. 91-98, Albany, New York, 1891.
- 11A. (and Clark, J. M.). Paleontology, an introduction to the study of the genera of Paleozoic Brachiopoda, vol. 8, pt. 1, 367 pp. 1893; vol. 8, pt. 2, 394 pp., 1894.
12. Brachiopods (numerous references to the occurrence of fossils in Missouri): New York Geol. Survey, Palentology, vol. 8, pt. 1, 367 pp., 20 pls., Albany, New York, 1892; pt. 2, 394 pp., il., Albany, New York, 1894.

Hall, R. H.

1. The Devonian and associated rocks of parts of Cole and Moniteau Counties, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1921.

Hansen, Ethel B.

1. A pre-Kansan record of *Picea canadensis* (pine tree) for Missouri: Rhodora, vol. 37, no. 433, pp. 16-19, 1 pl., 1 fig., January, 1935.

Hambach, Gustav.

1. Notes about the structure and classification of the Pentremites: St. Louis Acad. Sci. Trans., vol. 4, pp. 537-547, il., 1884.
2. Description of new Paleozoic Echinodermata: St. Louis Acad. Sci. Trans., vol. 4, pp. 548-554, il., 1884; (abstract), Sedalia Nat. Hist. Soc. Bull. 1, pp. 29-30, 1885.
3. A preliminary catalogue of the fossils occurring in Missouri: Mis-souri Geol. Survey Bull. 1, pp. 60-85, 1890.
4. Revision of the Blastoideae, with proposed new classification and description of new species: St. Louis Acad. Sci. Trans., vol. 13, pp. 67, il., 1903.

Harbaugh, M. D.

1. (and others). The story of the Tri-State zinc and lead district, Joplin, Missouri, Joint Convention, Western Division, Ameri-can Mining Congress and American Institute of Mining and Metallurgical Engineers, September 28, 29, 30, 1931, 43 pp., il., September, 1931.

2. Geology and development of the Tri-State zinc and lead mining district; Development of the district (abstract): Tulsa Geol. Soc. Digest, pp. 41-42, 1935.

Harcourt, G. A. Refer to Graton, L. C.

Harder, Edmund Cecil.

1. Manganese deposits of the United States, with sections on foreign deposits, chemistry and uses: U. S. Geol. Survey Bull. 427, pp. 125-126, 1910.

Hare, Sid J. Refer also to Rowley, R. R.

1. Trilobites of the upper Coal Measure group at Kansas City, Missouri: Kansas City Scientist, vol. 5, pp. 33-36, il., 1891.

Harlan, Richard.

1. Notice of the discovery of the remains of the Ichthyosaurus in Missouri: Am. Philos. Soc. Trans., new ser., vol. 4, pp. 405-409, il., 1834.
2. Decouverte d'un nouveau saurien au Missouri: Soc. Geol. France Bull. 4, p. 124, 1834.
3. Abstract of description of bones of fossil animals of Order Edentata (*Orycterotherium missouriense* was found in Benton County.): Am. Philos. Soc. Proc., vol. 2, pp. 109-111, 1842.
4. Critical notices of various remains hitherto discovered in North America: (Describes the extinct ox, *Bos pallasii*, DeKay, from New Madrid.): Pennsylvanian Geol. Soc. Trans., vol. 1, pp. 46, 112, 1834.
5. Description of bones of new fossil animal of order Edentata (*Orycterotherium missouriense* is described from the Pomme de Terre, Benton County): Am. Jour. Sci., 1st ser., vol. 44, pp. 69-83, 1843.
6. Notice of two new fossil animals from Brunswick Canal, Georgia; with observation on some of the fossil quadrupeds of the United States (Notices the mastodon remains of the Koch collection, from St. Louis.): Am. Jour. Sci., 1st ser., vol. 43, pp. 141-146, 1842.

Harris, Elmo G.

1. Road problems in the Ozarks: Univ. of Missouri, School of Mines and Met. Bull., vol. 9, no. 1, pp. 23, Rolla, Missouri, January, 1917.
2. (and Wheeler, H. L.). Road problems in the Ozarks: Univ. of Missouri, School of Mines and Met. Bull., 1st ed., vol. 9, no. 1, 23 pp., il., Rolla, Missouri, 1917; 2d ed., vol. 11, no. 3, 70 pp., il., Rolla, Missouri, 1919.

Harrison, Clark.

1. Missouri iron, Pilot Knob: Rocks and Minerals, vol. 17, no. 2, p. 46-51, 4 figs., February, 1942.

Harrison, Edwin.

1. Analysis of magnetite from Iron Mountain and Pilot Knob, Missouri: Boston Soc. Nat. Hist. Proc., vol. 6, p. 295, 1857.
2. Age of porphyry hills of southeast Missouri: St. Louis Acad. Sci. Trans., vol. 2, p. 504, 1868.

Hartnagel, Irma.

1. Geographic factors in the settlement of Hermann, Missouri: Washington University, unpublished thesis, 77 pp., front., 13 figs., St. Louis, Missouri, 1929.

Harch, Sidney. Refer to Collins, Lawrence.

Haskins, R. W.

1. What is a geode? (The siliceous nodular geode of Missouri and other western states distinguished from the irregular cavity geode.): Am. Naturalist, vol. 2, pp. 496-497, 1869.

Hawes, George Wesson.

1. (and others). Report on the building stones of the U. S. and statistics on the quarrying industry for 1880: U. S. 10th Census, vol. 10, 410 pp., 1884.

Hawkins, Alfred C. Refer to Wherry E. T.

Hawn, F.

1. Country between the Missouri and Mississippi Rivers: Missouri Geol. Survey, 1st and 2d Ann. Rept., pt. 2, pp. 121-156, 1855.

Haworth, Erasmus. Refer also to Keys, C. R. and Winslow, A.

1. Chert rocks of sub-Carboniferous Kansas (Describes the formation in which the lead and zinc of southwest Missouri are found.): Kansas City Rev. Sci., vol. 5, pp. 669-676, 1882.
2. Coal fields of Cherokee County, Kansas (Refers to granitic axis of Ozark uplift.): Kansas Acad. Sci. Trans., vol. 8, pp. 9-11, Topeka, Kansas, 1882.
3. Millerite: Science, vol. 8, p. 369, 1886.
4. Contribution to Archean geology of Missouri: Am. Geologist, vol. 1, pp. 280-297, 363-382, pl.; abstract, Johns Hopkins Univ. Circulars, vol. 7, no. 65, pp. 71-72, Baltimore, Maryland, 1888.
5. Crystalline rocks of Missouri: Iowa Acad. Sci. Proc., vol. 1, pt. 1, pp. 66-68, Des Moines, Iowa, 1890.
6. Age and origin of crystalline rocks of Missouri: Missouri Geol. Survey Bull. 5, pp. 11-42, 4 pls., Jefferson City, Missouri, 1891.
7. Notes on Missouri minerals: Iowa Acad. Sci. Proc., vol. 1, pt. 2, pp. 33-35, Des Moines, Iowa, 1892.
8. Prismatic sandstone from Missouri: Iowa Acad. Sci. Proc., vol. 1, pt. 2, pp. 36-37, Des Moines, Iowa, 1892.
9. Crystalline rocks of Missouri: Missouri Geol. Survey, vol. 8, pp. 81-224, 30 pls. and geological map, Jefferson City, Missouri, 1895.
10. Stratigraphy and correlation of Carboniferous formations: Kansas Univ. Geol. Survey, vol. 1, pp. 145-163, 1896.

11. (and Bennett, John). A geologic section from Baxter Springs to the Nebraska state line: Kansas Univ. Geol. Survey, vol. 1, pp. 35-71, 1896.
12. (and Keyes, Charles R.). Archaean: Missouri Geol. Survey, vol. 9, pt. 4, pp. 24-44, Jefferson City, Missouri, 1896.
- 12A. Special report on coal: Kansas Univ. Geol. Survey, vol. 3, pp. 36-37, 92, 94, 100, 1898.
13. The Galena-Joplin lead and zinc district: Mineral Industry, vol. 8, pp. 658-666, 1900.
14. Relation between Ozark uplift and ore deposits: Geol. Soc. America Bull., vol. 11, pp. 231-240, 1900.
15. History, geography, geology and metallurgy of Galena-Joplin lead and zinc: Kansas Univ. Geol. Survey, vol. 8, pp. 1-126, 1904.
16. (and Bennett, John). General stratigraphy (of Kansas): Kansas Univ. Geol. Survey, vol. 9, pp. 57-121, 1908.

Hay, O. P.

1. Bibliography and catalogue of the fossil Vertebrata of North America: U. S. Geol. Survey Bull. 179, 868, pp., 1902.
2. The Pleistocene mammals of Iowa: Iowa Geol. Survey, vol. 23, pp. 1-662, 1914.

Hay, Robert.

1. Natural gas in eastern Kansas: Kansas State Board Agriculture, Bienn. Rept., 1885-87, pt. 2, pp. 198-208, 1887.
2. The river counties of Kansas: Kansas Acad. Sci. Trans., vol. 14, pp. 230-260, 1896.

Hayes, William.

1. Stylolites of the Burlington-Keokuk limestones at Springfield, Missouri: Missouri Acad. Sci. Proc., vol. 5, no. 4, p. 104, 1940.

Haynes, Eli Stuart.

1. The Archie (Cass Co.), Missouri meteorite: Pop. Astronomy, vol. 43, no. 3, pp. 181-184, March, 1935; Soc. Research on Meteorites Contr., fasc. 1, pp. 11-14, January, 1936.

Hays, I.

1. Remarks on abstract of Professor Owen's paper on Koch collections to London Geological Society: Am. Philos. Soc. Trans., vol. 2, pp. 183-184, 1842.
2. Remarks on collection of fossil bones, chiefly of mastodon, brought to the city by Mr. Albert Koch, of St. Louis: Am. Philos. Soc. Proc., vol. 2, pp. 102-104, 1862.
3. Remarks on three papers recently read to Geological Society of London, relative to mastodonoid animals in collection of Mr. Koch: Am. Philos. Soc. Proc., vol. 2, pp. 264-267, 1862.

Hays, M.

1. Winoka gravels—supposed Tertiary deposits, description of deposits: Bull. Bradley Geol. Field Sta., Drury College, vol. 1, pt. 1, pp. 19-21, Springfield, Missouri, 1904.

Hayward, W. W.

1. Moniteau County, Missouri, its geographic features, agricultural and mineral resources, etc.: Published by W. W. Hayward and Co., California, Missouri, July, 1875.

Head, Royden Edward.

1. The cleavage surfaces of galena: *Am. Mineralogist*, vol. 16, no. 9, pp. 345-351, 4 figs., September, 1931.

Headden, William Parker.

1. Some phosphorescent calcites from Fort Collins, Colorado, and Joplin, Missouri: *Am. Jour. Sci.*, 4th ser., vol. 21, pp. 301-308, 1906.

Heap, R. R.

1. A geological drainage problems (lead and zinc district near Miami, Oklahoma and southwestern Missouri): *Eng. and Min. Jour.*, vol. 96, pp. 1205-1211, 1913.

Hedbert, Hollis D.

1. The effect of gravitational compaction on the structure of sedimentary rock: *Am. Assoc. Petroleum Geologist Bull.*, vol. 10, no. 11, pp. 1035-1072, November, 1926.

Hedburg, Eric.

1. Lead and zinc ores; the manner of their occurrence and their geological relation to the coal area of Missouri: *Mines and Minerals*, vol. 18, pp. 289-290, 1898.
2. The Missouri and Arkansas zinc mines at the close of 1900 (with discussion by Branner, J. C., and Nichols, H. W.): *Am. Inst. Min. Eng. Trans.*, vol. 31, pp. 379-404, 1013-1023, map, 1902.

Heinicke, Hubert C.

1. Some resistivity measurements over a gas-producing shoestring sand: *Missouri Acad. Sci. Proc.*, vol. 5, no. 4, p. 135, June, 1940.

Heinrich, Carl.

1. Some forms of ore deposits in limestone (attention is called to the altitude and evidence of internal erosion of limestone inclosing lead ores in certain parts of Missouri): *Eng. and Min. Jour.*, vol. 46, pp. 368-369, 1888.

Heinrich, Ross R.

1. Seismic activities in the St. Marys (Missouri) fault region since 1910: *Seismol. Soc. America Bull.*, vol. 27, no. 3, pp. 245-250, 2 figs., index maps, July, 1937; abstract, *Missouri Acad. Sci. Proc.*, vol. 3, no. 4, p. 131, September 15, 1937.
2. A contribution to the study of the seismicity of Missouri (abstracts): *Am. Geophys. Union Trans. 19th Ann. Mtg.* pt. 1, pp. 129-130; *Nat. Research Council*, August, 1938; *Missouri Acad. Sci. Proc.* 1938, vol. 4, no. 6. pp. 169-170, March 15, 1939.

3. (and Frank, Albert). The Illinois basin earthquake of November 17, 1937: *Earthquake Notes*, vol. 10, no. 3, pp. 1-7 (mimeographed), 2 figs., incl. index map, December, 1938; abstract, *Missouri Acad. Sci. Proc.* 1938, vol. 4, no. 6, pp. 170-171, March 15, 1939.
4. A contribution to the seismic history of Missouri: *Seismol. Soc. America Bull.*, vol. 31, no. 3, pp. 187-204, 4 figs., index and geol. maps, July, 1941.

Heinz, C. E.

1. Yankee ingenuity in a Tri-State mill: *Eng. and Min. Jour.*, vol. 136, no. 3, pp. 135-138, March, 1935.
2. Tripoli, in *Industrial minerals and rocks*, pp. 911-922, *Am. Inst. Min. Met. Engs.*, 1937.

Heller, Robert L.

1. Geology of the Marble Hill area, Bollinger County, Missouri: Univ. of Missouri, unpublished thesis, 110 pp., Columbia, Missouri, 1943.

Henbest, Robert L. Refer to Dunbar, C. O.

Henderson, E. P. Refer to Ross, C. S.

Hendriks, Herbert Edward.

1. Geology of the Macks Creek quadrangle, Missouri: State Univ. of Iowa, unpublished thesis, 122 pp., Iowa City, Iowa, 1942.

Herbert, C. A.

1. Analyses of Missouri Coals; Mining Methods: U. S. Bur. Mines Tech. Paper 366, pp. 5-7, Washington, 1926.

Herold, Paul George. Refer to Davis, W. E., and McQueen, H. S.

Heroy, William B.

1. Rock pressure: *Am. Assoc. Petroleum Geologists Bull.*, vol. 12, no. 4, pp. 355-384, April, 1928.

Herrick, E. C.

1. Fall of a meteorite in Missouri (at Little Piney, since called Arlington, Phelps Co.) February 13, 1839: *Am. Jour. Sci.*, 1st ser., vol. 37, pp. 385-386, 1939.

Herrick, R. L.

1. The Joplin zinc district: *Mines and Minerals*, vol. 28, pp. 145-157, 1907.

Hershey, Oscar H.

1. The Devonian series in southwestern Missouri: *Am. Geologist*, vol. 16, pp. 294-300, 1895.
2. River valleys of the Ozark Plateau: *Am. Geologist*, vol. 16, pp. 338-357, 1895.
3. On a Devonian limestone breccia in southwestern Missouri: *Science*, new ser., vol. 1, pp. 676-678, 1895.

4. Ozarkian epoch—a suggestion: *Science*, new ser., vol. 3, pp. 620-622, 1896.
5. An Ozark soil: *Science*, new ser., vol. 4, pp. 261-263, 1896.
6. The physiographic development of the upper Mississippi Valley: *Am. Geologist*, vol. 20, pp. 246-268, 1897.
7. Correlation in the Ozark region; a correction: *Am. Geologist*, vol. 24, pp. 190-192, 1899.
8. The upland loess of Missouri; its mode of formation: *Am. Geologist*, vol. 25, pp. 369-374, 1900.
9. Peneplains of the Ozark highland: *Am. Geologist*, vol. 27, pp. 25-41, 1901.

Hess, Frank L.

1. Tungsten Minerals and deposits: *U. S. Geol. Survey Bull.* 652, pp. 35, 36, 47, 48, and 55, 1917.

Hibbard, Claude William.

1. A new fish, *Listracanthus eliani*, from the Pennsylvanian of Nodaway County, Missouri: *Univ. of Kansas Sci. Bull.*, vol. 25, no. 6, pp. 169-171, 1938.

Higgins, Edward. Refer also to Lanza, A.

1. Sheet-ground mining in the Joplin District: *Min. and Eng. World*, vol. 43, no. 14, pp. 523-526, October 2, 1915.
2. (and others). Siliceous dust in relation to pulmonary disease among miners in the Joplin District, Missouri: *U. S. Bureau of Mines Bull.* 132, 1917.

Hilgard, E. W.

1. Remarks on the drift of the western and southern states and its relation to the glacier and iceberg theories: *Am. Jour. Sci.*, 2d ser., vol. 42, pp. 343-347, 1866.
2. Geological history of gulf of Mexico: *Am. Naturalist*, vol. 6, pp. 514-525, 1871.
3. The loess of the Mississippi Valley and the eolian hypothesis: *Am. Jour. Sci.*, 3d ser., vol. 18, pp. 106-112, 1879.
4. Report on cotton production in the United States (contains a map showing the geology of that part of Missouri where cotton is raised; also descriptions of it in the text): *U. S. Census Rept.* for 1880, vol. 5, 1880.

Hill, George.

1. Twenty-sixth annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1912, 130 pp., 3 charts, Jefferson City, Missouri, 1913.
2. Twenty-seventh annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1913, 161 pp., 3 charts, Jefferson City, Missouri, 1914.
3. Twenty-eighth annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1914, 159 pp., 4 charts, Jefferson City, Missouri, 1915.

4. Twenty-ninth annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1915, 173 pp., 4 charts, Jefferson City, Missouri, 1916.
5. Thirtieth annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1916, 135 pp., 4 charts, Jefferson City, Missouri, 1917.
6. Thirty-first annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1917, 101 pp., Jefferson City, Missouri, 1918.
7. Thirty-second annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1918, 82 pp., Jefferson City, Missouri, 1919.
8. Thirty-third annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1919, 66 pp., Jefferson City, Missouri, 1920.
9. Thirty-fourth annual report of the Bureau of Mines, mining and mine inspection of the State of Missouri for the year ending December 31, 1920, Jefferson City, Missouri, 1921.

Hill, Robert T.

1. Reconnaissance of Ouachita Mountain system in Indian Territory: *Am. Jour. Sci.*, 3d ser., vol. 42, pp. 11-121, 1891.

Hillebrand, William Francis.

1. Zinc-bearing spring waters from Missouri: *Am. Jour. Sci.*, 3d ser., vol. 43, pp. 418-422, 1892.

Hinchey, Norman. Refer also to Grohskopf, J. G., Beckman, H. C. and McQueen, H. S.

1. The Platin formation between Herculaneum, Missouri, and St. Albans, Missouri: Washington University, unpublished thesis, 98 pp., fig., 17 pl., St. Louis, Missouri, 1928.
2. The Fauna and stratigraphy of the St. Louis formation (abstract): Harvard University Summaries of Theses, pp. 135-138, Cambridge, Massachusetts, 1935.
3. (and Ray, Louis Lany). New Mississippian species of *Stropoholusia* from Missouri: *Jour. Paleontology*, vol. 9, no. 3, pp. 247-250, 21 figs., April 1935; (abstract), *Geol. Soc. America Proc.* 1933, pp. 350-371, June, 1934.
4. Mineral production of Missouri: Missouri Geol. Survey and Water Resources, 61st Bienn. Rept. State Geologist, 1939-40, pp. 35-67, 1941.

Hinds, Henry.

1. Coal deposits of Iowa: Iowa Geol. Survey, vol. 19, pp. 21-396, 1909.
2. Coal fields of Iowa and Missouri: *Mines and Minerals*, vol. 31, pp. 80-82, 1910.
3. The principal coal fields of northern Missouri: Missouri Bur. Geology and Mines, Bienn. Rept., 1909-10, pp. 26-35, 1911.
4. Coal deposits of Missouri: Missouri Bur. Geol. and Mines, 2d ser., vol. 11, 503 pp., 97 figs., 7 maps, 1912.
5. (and Greene, F. C.). The stratigraphy of the Pennsylvanian series in Missouri: Missouri Bureau Geology and Mines, 2d ser., vol. 13, 407 p., 1915.

6. (and Greene, F. C.). The description of the Leavenworth and Smithville quadrangles (Missouri-Kansas): U. S. Geol. Survey Atlas, Leavenworth-Smithville folio no. 206, 13 pp., maps, 1917.
7. Unconformities in the Pennsylvanian: Am. Assoc. Petroleum Geologists Bull., vol. 10, no. 12, pp. 1303-1304, December, 1926.

Hodge, James T.

1. Wisconsin and Missouri lead region: Am. Jour. Sci., 1st ser., vol. 43, pp. 35-72, 1842.

Hoeman, Erwin Charles.

1. Fluorine and manganese content of certain Missouri waters: Univ. of Missouri, School of Mines and Met. unpublished thesis, 115 pp., tables, il., Rolla, Missouri, 1935.

Hoffman, Arnold D. Refer to Croneiss, C. G.

Holibaugh, John R.

1. The lead and zinc mining industry of southwest Missouri and southeast Kansas, 54 pp., il, fold. map, New York and London, The Scientific Publishing Co., 1895.

Holmes, Chauncey DePew.

1. Nebraskan-Kansan drift boundary in Missouri (abstract): Geol. Soc. America Bull., vol. 52, no. 12, pt. 2, pp. 1907-1908, December 1941; vol. 53, no. 10, pp. 1479-1490, 3 figs., index maps, October 1943.

Holmes, Nathaniel.

1. On the loess and drift of Illinois and Missouri: St. Louis Acad. Sci. Trans., vol. 2, pp. 565-659, 1868.

Hopkins, T. C.

1. Springs: Influence of stratigraphy on their emergences, as illustrated in Ozark uplift: Am. Geologist, vol. 14, pp. 365-368, 1894.

Hopson, R. F.

1. Barite mining in southern Missouri: Explosives Eng., vol. 14, no. 4, pp. 107-113, April, 1936.

Horner, W. E.

1. Dental system of mastodon (an account of some lower jaws, in Mr. Koch's collection, where there is a solitary tusk on the right side): Am. Philosophical Soc. Trans., new ser., vol. 8, pp. 53-60, 1840.
2. Note of remains of mastodon: Am. Philosophical Soc. Proc., vol. 1, pp. 279-283, 1861.
3. Note of remains of mastodon; and some other extinct animals, collected together in St. Louis, Missouri: Am. Jour. Sci., 1st ser., vol. 40, pp. 56-60, 1840.
4. Remarks of dental system of mastodon (abstract of an account of some lower jaws in Mr. Koch's collection): Am. Philosophical Soc. Proc., vol. 1, pp. 306-308, 1861.

Hotchkiss, William O.

1. Henry A. Buehler, 1876-1944: *Econ. Geology*, vol. 39, no. 4, 1944.

Hovey, Edmund Otis.

1. Study of cherts in Missouri: *Am. Jour. Sci.*, 3d ser., vol. 48, pp. 401-409, 1894; *Missouri Geol. Survey*, 1st ser., vol. 7, pp. 727-738, 1894.
2. American "tripoli": *Sci. Am. Suppl.*, vol. 381, p. 15487, 1894.

Howe, H. M.

1. Yearbook of the commercial, banking and manufacturing interests of St. Louis, with a general review of its transportation facilities and business progress (Contains chapters on fire-clay, pp. 49-54; operations of the American Plate Glass Company at Crystal City, pp. 107-109; Iron and Steel, pp. 113-124; Lead, White Lead and Oil, pp. 125-129; Granite, pp. 143-150; Coal, pp. 177-182.): 245 pp., S. Ferd. Howe and Co., 1882-83.

Howell, B. F.

1. (and Bridge, J., Deiss, C. F., Edwards, I., Lichman, C., Raasch, G. O., Resser, C. E., assisted by Duncan, D. C., Mason, J. F., and Denison, N. M.). Correlation of the Cambrian formations of North America: *Geol. Soc. America Bull.*, vol. 55, pp. 993-1004, 1 pl., August, 1944.

Howell, Jesse V.

1. The Mississippi River arch: *Kansas Geol. Soc., Ninth Annual Field Conference Guide Book*, pp. 386-389, 3 cross sections, 2 geological maps, August, 1935.

Howes, Warren.

1. Salts in Tri-State mill waters: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, 64 pp., il., plates, charts, Rolla, Missouri, 1930.

Hoy, P. R.

1. Dr. Koch's Missouriium: *Am. Naturalist*, vol. 5, p. 147, Salem, 1871.

Huffman, Arch. Refer to Carmody, R. A.

Hughes, V. H.

1. Geology along the St. Louis and San Francisco Railroad from Rolla to Newburg: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1907.
2. Reconnaissance work, Dallas, Douglas, Taney, Ozark, Howell, Oregon and Crawford Counties: *Missouri Geol. Survey, Bienn. Rept. State Geologist*, 1909-10, pp. 36-54, 1911.
3. Geology of a complexly folded area on Crooked Creek, in Crawford County, Missouri: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1912.

Humphreys, A. A.

1. (and Abbot, H. L.). Report upon physics and hydraulics of Mississippi River (Numerous notes are given on the geological features contiguous to the river.): U. S. Army, Corps of Top. Eng. Prof. Paper no. 13, 691 pp., Washington, 1876.

Hundhausen, Mary. Refer also to Grohskopf, J. G.

1. Subsurface distribution of the Meramec group in northern Missouri: Missouri Acad. Sci. Trans., vol. 7, p. 108, 1941.

Hunt, T. S.

1. Reactions of salts of lime and magnesia, and on formations of gypsums and magnesian rocks (Notices the magnesian limestones of the state.): Am. Jour. Sci., 2d ser., vol. 28, pp. 365-384, 1859.
2. On some points in American geology: Am. Jour. Sci., 2d ser., vol. 31, pp. 392-413, 1861.
3. Decay of rocks geologically considered (The rocks of Missouri are especially referred to.): Am. Jour. Sci., 1st ser., vol. 26, p. 207, 1882.
4. Iron ores of United States (Gives the geological distribution of ores in Missouri.): Eng. and Min. Jour. vol. 50, pp. 601-602 and 624, 1890.

Huntington, Ellsworth.

1. Chart of the distribution of loess: Geol. Soc. America Bull., vol. 25, p. 575, 1914.

Huntington, Oliver W.

1. Catalogue of all recorded meteorites; with description of specimens in Harvard College collection, including the cabinet of the late J. Lawrence Smith (Several references are made to meteoric falls in Missouri.): Am. Acad. Art and Sci. Proc., new ser., vol. 15, pp. 37-110, Boston, Massachusetts, 1887.

Hunze, Edmond Carl.

1. A study of the iodine content of representative Missouri waters: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1927.

Hus, Henri.

1. An ecological cross-section of the Mississippi River in the region of St. Louis (Discusses geology of region.): Missouri Botanical Garden, 19th Ann. Rept., pp. 127-258, pls. 10-20, cross-section and diagrams, 1908.

Hyatt, Alpheus.

1. Carboniferous cephalopods (includes Missouri species): Texas Geol. Survey Annual Rept. no. 2, pp. 327-356, il., 1891.

Illidge, R. E. Refer to Fowler, George M.

Ingerson, M. J. Refer to Bridge, J.

Ireland, H. A.

1. Geology of Mayes, Delaware and Ottawa Counties (Kansas): Oklahoma Geol. Survey Bull. 40, Oil and Gas in Oklahoma, vol. 3, pp. 471-503, 1930.

Isern, Elmer.

1. Central milling in the Tri-State District: Eng. and Min. Jour., vol. 131, no. 2, pp. 49-54, January, 1931.

Jackson, C. F.

1. Methods of mining disseminated lead ore at a mine in the Southeast Missouri District: U. S. Bureau of Mines Inf. Circ. 6170, 21 pp., 8 figs., 1929.

Jackson, R. T.

1. (and Jaggar, T. A., Jr.). Studies of *Melonites multiporous* (The specimens are from St. Louis.): Geol. Soc. America Bull., vol. 7, pp. 171-254, 1896.
2. Studies of *Palaeochinoidea* (Several species are described from Missouri and references are made to others.): Geol. Soc. America Bull., vol. 7, pp. 171-254, 1896.

Jaggar, T. A., Jr. Refer to Jackson, R. T.

Jakosky, John Jay.

1. (and Dreyer, R. M., and Wilson, C. H.). Geophysical investigation in the Tri-State zinc and lead mining district: Kansas State Geol. Survey Bull. 44, 151 pp., 55 figs., including maps and profiles, 1942: (abstract), Am. Assoc. Petroleum Geologists Bull., vol. 27, no. 1, p. 86-87, January, 1943.

Jamison, J.

1. Report on the coal fields and coal mines on the western waters (Describes briefly cannel coal of Callaway County.): Washington, 1852.

Jeffords, Russell M.

1. Lophophyllid corals from the lower Pennsylvanian rocks of Kansas and Oklahoma: Kansas Geol. Survey Bull. 41; Reports of Studies, pt. 5, pp. 229-232, 1942.

Jenney, W. P.

1. Lead and zinc deposits of Mississippi Valley: Am. Inst. Min. Eng. Trans., vol. 22, pp. 171-225, 1894.
2. A preliminary report of the work on the lead and zinc fields of Missouri: U. S. Geol. Survey 11th Ann. Rept., pp. 80-81, 1891.

Jenny, Hans.

1. Behavior of potassium and sodium during the process of soil formation: Univ. of Missouri, Agri. Exp. Sta. Bull. 162, pp. 1-63, Columbia, Missouri, October, 1931.

Jewell, J. E.

1. Technical problems of the southeast Missouri lead district: Mineral Indus. Conf. Proc., Rolla, Missouri, 1938, pp. 5-15, Rolla, Missouri, 1904.

Jewett, John Mark. Refer also to Oakes, Malcolm C.

1. A newly found locality of glacial striae south of Missouri River: Kansas Acad. Sci., Trans., vol. 37, p. 153, 1934.
2. (and Newell, N. D.). Geology of Wyandotte County, Kansas: Kansas Geol. Survey Bull. 21, pp. 151-205, 11 pls., incl. geol. maps, 2 figs., 1935.

Johnson, Clayton H.

1. Lower Pennsylvanian fusulinids (abstract): Missouri Acad. Sci. Proc., vol. 5, no. 4, pp. 128-129, 1940; Univ. of Missouri, thesis, Columbia, Missouri, 1939.

Johnson, Hugh Nelson.

1. The stratigraphy of the Maquoketa shale in Missouri and adjacent parts of Illinois: Washington Univ., unpublished thesis, 185 pp., 53 figs., 2 pl., St. Louis, Missouri, 1939.

Johnson, R. D. O.

1. A unique lead deposit (Madison Co., Missouri): Eng. and Min. Jour., vol. 81, p. 794, 1906.

Johnson, Walter Rogers.

1. Report to navy department of United States on American coals applicable to stream navigation and other purposes (contains an analysis of coal from Osage River): Twenty-eight Congress, 1st sess., Sen. Doc. 436, p. 539, Washington, 1844.

Johnson, William H.

1. The lead and zinc fields of the Ozark uplift: American Bureau of Geography Bull., vol. 2, pp. 59-73, Winona, Wisconsin, 1901.

Jones, John A.

1. Representative mining industries (statistics in regard to Missouri coal product): U. S. 11th Census, 1890, pp. 386-389, Washington, 1892.

Julien, A. A.

1. Origin of crystalline iron ores (The hematites of Lake Superior and Missouri are described.): Eng. and Min. Jour., vol. 35, pp. 207-208, 1883.

Just, Evan.

1. Tri-State District strives to maintain output: Eng. and Min. Jour., vol. 143, no. 12, pp. 69-70, December, 1942.

Kansas Geological Society. References to individual papers included appear under individual author's name.

1. Guidebook, second annual field conference, Ozark Mountains, Missouri, Arkansas, September 2-9, 1928: 20 pp. planographed, Wichita, Kansas, September, 1928.

2. Guidebook, sixth annual field conference, Carboniferous rocks of the northern Mid-continent, Kansas, Missouri, Nebraska; August 28-September 3, 1932: planographed, Wichita, Kansas, August, 1932.
3. Guidebook seventh annual field conference, older Paleozoic rocks of the Ozark Mountains and adjacent areas, Missouri, Arkansas, Oklahoma: September 3-7, 1933: 54 pp., planographed, Wichita, Kansas, August, 1933.
- 3A. Guidebook, ninth annual field conference, upper Mississippi Valley, August to September 1, 1935 (Missouri geology does not appear in the body of the text but is referred to in two articles, one by Workman, the other by Howell which are listed under the names of these authors.): 471 pp., 263 figs., numerous maps and sections, planographed Wichita, Kansas, August, 1935.
4. Guidebook, tenth annual field conference, Pennsylvanian and Permian rocks of northeastern Kansas and northwestern Missouri, September 4-7, 1936: planographed, Wichita, Kansas, August, 1936.
5. Guidebook, thirteenth annual field conference, Paleozoic rocks of southwestern Illinois and southeastern Missouri, August 30-September 3, 1939: 176 pp., numerous maps and sections, planographed, Wichita, Kansas, August, 1939.
6. Guidebook, fifteenth annual field conference, Paleozoic rocks of central and northeastern Missouri, and adjoining areas in Illinois, August 27-31, 1941: planographed, Wichita, Kansas, August, 1941.

Kay, George Frederick.

1. Some features of the Kansan drift in southern Iowa: Geol. Survey, vol. 25, pp. 612-615, 1914; abstract, Geol. Soc. America Bull., vol. 27, pp. 115-119, 1914.
2. Some large boulders in the Kansan drift of southern Iowa: Iowa Geol. Survey, vol. 27, pp. 345-353, 1920.
3. (and Apfel, E. Y.). The pre-Illinoian Pleistocene geology of Iowa: Iowa Geol. Survey, vol. 41, pp. 1-304, 1929; Reprint, Iowa Geol. Survey Special Report, 1944.
4. The bibliography of the Pleistocene geology of Iowa: Iowa Geol. Survey Special Report, 1944.

Kay, George Marshall.

1. Stratigraphy of the Decorah formation: Jour. Geology, vol. 37, pp. 639-671, 1929.
2. Distribution of Ordovician altered volcanic materials and related clays: Geol. Soc. America Bull., vol. 46, pp. 235-244, 1934.
3. Ordovician system of the Upper Mississippi Valley: Kansas Geol. Soc. Guidebook, 9th Ann. Field Conf., pp. 281-295, 1935.
4. Stratigraphy of the Trenton group: Geol. Soc. America Bull., vol. 48, pp. 233-302, 1937.

Keenan, J. E.

1. Ostracodes from the Maquoketa shale of Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Keener, O. W.

1. Method and cost of mining at Barr Mine, Tri-State zinc and lead district: U. S. Bureau of Mines Inf. Circ. 6159, 9 pp., 5 figs., 1929.
2. Methods and costs of mining at the Hartley-Grantham Mine, Tri-State zinc and lead district: U. S. Bureau of Mines Inf. Circ. 6286, 8 pp., 8 figs., 1930.

Keiser, H. D.

1. Mine La Motte: A historic lead property in southeast Missouri: Eng. and Min. Jour., vol. 130, no. 3, pp. 110-114, August, 1930.

Keith, B. Ashton.

1. (and Jones, J. L.). On studies in fluorescence and phosphorescence (abstract): Missouri Acad. Sci. Proc., vol. 5, no. 4, p. 104, June 25, 1940.

Keller, Walter David. Refer also to Bradley, R. S.

1. Earth resistivity at depths of less than 100 feet: Am. Assoc. Petroleum Geologist Bull., vol. 18, no. 1, pp. 39-62, 17 figs., January, 1934; Univ. of Missouri, thesis, Columbia, Missouri, 1933.
2. The occurrence of Mendozite (soda alum) in St. Louis and Callaway Counties, Missouri (abstract): Missouri Acad. Sci. Proc., vol. 1, p. 123, 1935.
- 2A. The intimate life of a Missouri fire brick: A. P. Green Fire Brick Company, 8 pp., Mexico, Missouri, 1937.
3. Cave pearls in a cave near Columbia, Missouri: Jour. Sedimentary Petrology, vol. 7, no. 3, pp. 108-109, December, 1937.
4. Diaspore clay cast of fossil wood in a Missouri diaspore pit: Am. Mineralogist, vol. 23, no. 7, pp. 461-463, 1 fig., July, 1938.
5. A sandstone-covered Missouri flint clay pit: Am. Ceramic Soc. Bull., vol. 17, no. 8, p. 322, August, 1938.
6. Varve-like deposit in a solution channel (near Columbia, Missouri): Jour. Sedimentary Petrology, vol. 9, no. 9, pp. 32-35, April, 1939.
7. Differential packing as a possible display of bedding: Jour. Sedimentary Petrology, vol. 9, pp. 131-133, 1 fig., December, 1939.
8. Aurichalcite (basic zinc copper carbonate) in Missouri: Am. Mineralogist, vol. 25, no. 5, pp. 375-376, May, 1940.
9. Common rocks and minerals of Missouri: Univ. of Missouri Bull., vol. 46, no. 5, (Arts and Science Series no. 1), 78 pp., 1945.

Kellett, Betty.

1. Geologic cross section from western Missouri to western Kansas, showing detailed correlation of Permian Big Blue series and Pennsylvanian (included in classification of lower Permian and Pennsylvanian systems of Kansas and Nebraska, 2d ed., by Moore, R. C., and Condra, G. E.), horizontal scale: 1 mile to 5 inches, vertical scale 1 inch to 250 feet, October, 1932.
2. Carboniferous ostracodes: Jour. Paleontology, vol. 10, no. 8, pp. 769-784, December, 1936; correction, vol. 11, no. 1, p. 80, January, 1937.

Kemp, J. F.

1. Notes on ore deposits, and ore-dressing in southeastern Missouri: Columbia Univ., School of Mines Quart., vol. 9, pp. 74-82, New York, 1887.

Kerocher, Raymond P. Refer also to Newell, N. D.

1. (and Merchant, F. E.). Some Fusulinids from the Missouri series of Kansas: Jour. Paleontology, vol. 13, pp. 594-614, 1939.

Kersting, F. J. Refer to Anderson, P. B.

Keyes, Charles Rollin. Refer also to Haworth, E., and Rowley, R. R.

1. Note on the distribution of certain loess fossils: Am. Geologist, vol. 4, pp. 119-121, 1889.
- 1A. The Carboniferous Echinodermata of the Mississippi Basin: Am. Jour. Sci., 3d ser., vol. 38, pp. 186-193, 1889.
2. The classification of the lower Carboniferous rocks of the Mississippi Valley: Diss., Johns Hopkins Univ., 24 pp., 1892.
3. The principal Mississippian section: Geol. Soc. America Bull., vol. 3, pp. 283-300, 1892.
4. A remarkable fauna at the base of the Burlington limestone in north-eastern Missouri: Am. Jour. Sci., 3d ser., vol. 44, pp. 447-452, 1892.
5. The present basal line of delimitation of the Carboniferous in north-eastern Missouri: Am. Geologist, vol. 10, pp. 380-384, 1892.
6. A new locality for millerite (Keokuk, Iowa): Am. Geologist, vol. 11, p. 126, 1893.
7. A bibliography of North American paleontology, 1888-1892: U. S. Geol. Survey Bull. 121, 251, pp., 1894.
8. Paleontology of Missouri, Part I (including stratigraphic catalogue of Missouri fossils and state geological map): Missouri Geol. Survey, 1st ser., vol. 4, 271 pp., il., Jefferson City, Missouri, 1894.
9. Paleontology of Missouri, part II: Missouri Geol. Survey, 1st ser., vol. 5, 266 pp., il., Jefferson City, Missouri, 1894.
- 9A. Crustal adjustment in the upper Mississippi Valley: Geol. Soc. America Bull., vol. 4, pp. 231-242, 1894.
10. Biennial report of the State Geologist to the 38th General Assembly, 1893-94: Missouri Geol. Survey, 60 pp., Jefferson City, Missouri, 1895.
11. Organization and results of a State Geological Survey: Missouri Geol. Survey, 1st ser., vol. 8, pp. 13-79, 1895.
12. Characteristics of Ozark Mountains: Missouri Geol. Survey, 1st ser., vol. 8, pp. 317-352, 1895.
13. The Cambro-Silurian question in Missouri and Arkansas: Jour. Geology, vol. 3, pp. 519-526, 1895.
14. A hypsometric map of Missouri: Am. Geologist, vol. 15, pp. 314-337, map, 1895.
15. Superior Mississippian in western Missouri and Arkansas: Am. Geologist, vol. 16, pp. 86-91, 1895.
16. Granite rocks of Missouri: Eng. and Min. Jour., vol. 60, pp. 516-517, 1895.

17. Secular decay of granitic rocks: *Iowa Acad. Sci. Proc.*, vol. 2, pp. 27-31, 1895.
- 17A. A synopsis of American Paleozoic echinoids: *Iowa Acad. Sci. Proc.*, vol. 2, pp. 178-194, 1895.
18. Areal geology and its relation to other geological work: *Missouri Geol. Survey*, 1st ser., vol. 9, pp. 11-16, 1896.
- 18A. Stages of the Des Moines: *Iowa Acad. Sci. Proc.*, vol. 4, pp. 22-24, 1896.
19. The geological occurrence of clays: *Missouri Geol. Survey*, 1st ser., vol. 11, pp. 35-48, map, 1896.
20. Geographic relations of the granites and porphyries in the eastern part of the Ozarks: *Geol. Soc. America Bull.* 7, pp. 363-376, map, 1896; abstracts, *Am. Geologist*, vol. 17, pp. 91-92, 1896; *Jour. Geology*, vol. 4, pp. 375-377, 1896.
21. The thickness of the Paleozoic rocks in the Mississippi basin: *Am. Geologist*, vol. 17, pp. 169-173, 1896.
22. Serial nomenclature of the Carboniferous: *Am. Geologist*, vol. 18, pp. 22-28, 1896.
23. The Bethany limestone of the western interior coal fields: *Am. Jour. Sci.* 4th ser., vol. 2, pp. 221-225, 1896.
24. Uber das Carbon des Mississippi thales (concerning the Carboniferous of the Mississippi Valley): *Neus Jahrb. fur Mineralogie, Geologie und Paleontologie*, vol. 1, pp. 96-100, 1896.
25. Missouri building and ornamental stones: *Stone*, vol. 12, pp. 432-436, 546-557; vol. 13, pp. 30-32, 1895, 1896; abstract, *Eng. and Min. Jour.*, vol. 62, pp. 199-201, 1896.
26. Note on the nature of cone-in-cone: *Iowa Acad. Sci. Proc.*, vol. 3, pp. 75-76, 1896.
27. Two remarkable cephalopods from the upper Paleozoic: *Iowa Acad. Sci. Proc.*, vol. 3, pp. 76-78, il., 1896.
28. Bibliography of Missouri geology: *Missouri Geol. Survey*, 1st ser., vol. 10, pp. 221-523, 1896.
29. A report on Mine La Motte sheet, including portions of Madison, St. Francois, and Ste. Genevieve Cos.: *Missouri Geol. Survey*, 1st ser., vol. 9, Sheet Report no. 4, pp. 4-124, map (under separate cover), Jefferson City, Missouri, 1896.
30. Dual character of the Kinderhook fauna: *Am. Geologist*, vol. 20, pp. 167-176, 1897.
31. Relations of the Devonian and Carboniferous in the upper Mississippi Valley: *St. Louis Acad. Sci. Trans.*, vol. 7, pp. 357-369, 1897.
32. Biennial report of the State Geologist to the 39th General Assembly, 1895-96: *Missouri Geol. Survey*, 63 pp., maps, Jefferson City, Missouri, 1897.
33. Stages of the Des Moines, or chief coal-bearing series of Kansas and southwest Missouri and their equivalent in Iowa: *Iowa Acad. Sci. Proc.*, vol. 4, pp. 22-25, 1897.
34. (and Rowley, R. R.). Vertical range of fossils at Louisiana (Missouri): *Iowa Acad. Sci. Proc.*, vol. 4, pp. 26-40, 1897.
35. Distribution and character of Missouri clays: *Mineral Industry* 1896, vol. 5, pp. 127-137, 1897.
36. Carboniferous formations of southwestern Iowa: *Am. Geologist*, vol. 21, pp. 346-350, 1898.

37. Structure of the coal deposits of the trans-Mississippian field: *Eng. and Min. Jour.*, vol. 65, pp. 253-254, 280-281, 1898.
38. Carboniferous formations of the Ozark region: *Iowa Acad. Sci., Proc.*, vol. 5, pp. 55-58, 1898.
39. Probable stratigraphical equivalents of the Coal Measures of Arkansas: *Jour. Geology*, vol. 6, pp. 356-365, 2 figs., 1898.
40. Remarks on the classification of the Mississippian series: *Am. Geologist*, vol. 22, pp. 108-113, 1898.
41. The principal Missourian section (abstract): *Am. Geologist*, vol. 22, p. 251, 1898; *Science*, new ser., vol. 8, p. 464, 1898.
42. Eolian origin of loess: *Am. Jour. Sci.*, 4th ser., vol. 6, pp. 299-304, 1898; *Societe Belge de geologie, Bull.* 12, pp. 14-21, 1901.
43. Some geological formations of the Cap-au-Gres uplift: *Iowa Acad. Sci. Proc.*, vol. 5, pp. 58-63, 1898.
44. The Missourian series of the Carboniferous: *Am. Geologist*, vol. 23, pp. 298-316, 1899.
45. Kinderhook stratigraphy: *Jour. Geology*, vol. 8, pp. 315-321, 1900.
46. Certain faunal aspects of the original Kinderhook: *Am. Geologist*, vol. 26, pp. 315-321, 1900.
47. The geological position of trans-Mississippian coals: *Eng. and Min. Jour.*, vol. 69, pp. 528-529, 1900.
48. Coal floras of the Mississippi Valley: *Science*, new ser., vol. 11, pp. 898-900, 1900.
49. Formational synonymy of the Coal Measures of the western basin: *Iowa Acad. Sci. Proc.*, vol. 7, pp. 82-105, pls. 6-7, 1900.
50. Correlative relations of certain subdivisions of the Coal Measures of Kansas: *Am. Geologist*, vol. 25, pp. 347-353, 1900.
51. The stratigraphical location of named trans-Mississippian coals: *Eng. and Min. Jour.*, vol. 72, p. 198, 1901.
52. Nomenclature of the Cambrian formations of the St. Francois Mountains (Missouri): *Am. Geologist*, vol. 28, pp. 51-53, 1901.
53. Horizons of Arkansas and Indian Territory coal compared with those of other trans-Mississippian coals: *Eng. and Min. Jour.* vol. 71, pp. 692-693, 1901.
54. Time values of provincial Carboniferous terranes: *Am. Jour. Sci.*, 4th ser., vol. 12, pp. 305-309, 1901.
55. A schematic standard for the American Carboniferous: *Am. Geologist*, vol. 28, pp. 293-305, 1901.
56. Names of coals west of the Mississippi River: *Iowa Acad. Sci. Proc.*, vol. 8, pp. 128-137, 1901.
57. A depositional measure of unconformity: *Geol. Soc. America Bull.*, vol. 12, pp. 173-196, 1 pl., 1901.
58. Depositional equivalent of hiatus at base of our coal measures; and the Arkansas series, a new terrane of the Carboniferous in the western interior basin: *Iowa Acad. Sci. Trans.*, vol. 8, pp. 119-128, 1901.
59. On a crinoidal horizon in the upper Carboniferous: *Science*, new ser., vol. 13, pp. 915-916, 1901.
60. Correlation of the Clarinda well section with the schematic section of the Carboniferous: *Iowa Geol. Survey*, vol. 2, pp. 461-463, 1901.

61. Diverse origins and diverse times of formation of the lead and zinc deposits of the Mississippi Valley: *Am. Inst. Min. Eng. Trans.*, vol. 31, pp. 603-611, 1902; *Mining and Metallurgy*, vol. 24, pp. 715-717, 1901; abstract, *Mining*, vol. 8, pp. 149-150, 1901.
62. Devonian interval in Missouri: *Geol. Soc. America Bull.*, vol. 13, pp. 267-292, 1902.
63. Determination of the Cambrian age of the magnesian limestones of Missouri: *Am. Geologist*, vol. 29, pp. 384-387, 1902.
64. Significance of the occurrence of minute quantities of metalliferous minerals in rocks: *Iowa Acad. Sci. Proc.*, vol. 10, pp. 99-103, 1903.
65. Genesis of certain cherts: *Iowa Acad. Sci. Proc.*, vol. 10, pp. 103-105, 1903.
66. Notes on the classification of American Carboniferous deposits: *Jour. Geology*, vol. 14, pp. 71-76, 1906.
67. Geographic distribution of lead and zinc deposits of the Mississippi Valley: *Eng. and Min. Jour.*, vol. 86, pp. 1004-1005, 1908.
68. Ozark lead and zinc deposits, their genesis, localization and migration: *Am. Inst. Min. Eng. Bull.*, vol. 26, pp. 119-166, 1909; *Trans.*, vol. 40, pp. 184-231, 1910; *Mining World*, vol. 30, pp. 413-433, 481-485, 543-546, 1909.
69. Migrations of the Joplin zinc belt: *Eng. and Min. Jour.*, vol. 87, p. 1049, 1909.
70. Ozark lead and zinc deposits; their genesis, localization, and migration: *Am. Inst. Min. Eng. Bull.*, vol. 43, pp. 591-597, 1910; *Trans.*, vol. 41, pp. 879-885, 1911.
71. The Guadalupian series, and the relation of its discovery to the existence of a Permian section in Missouri: *St. Louis Acad. Sci. Trans.*, vol. 19, no. 9, pp. 123-129, 1910.
72. Relations of Missouri River loess mantle and Kansas drift sheet: *Am. Jour. Sci.*, 4th ser., vol. 33, pp. 32-34, 1912.
- 72A. Nether delimitation of our Carbonic rocks: *Iowa Acad. Sci. Proc.*, vol. 19, pp. 153-156, 1912.
73. Scheme of the stratigraphic succession in Missouri: 4 pp., Des Moines, Iowa, 1914.
- 73A. Affinities of the Alexandrian series: *Am. Jour. Sci.*, 4th ser., vol. 37, pp. 254-256, 1914.
74. Serial subdivision of the early Carbonic succession in the continental interior: *Iowa Acad. Sci. Proc.*, vol. 21, pp. 189-193, map, 1914.
75. Complexity of the Alexandrian series: *Science*, new ser., vol. 41, pp. 863-864, 1915.
76. Terranal affinities of original Chouteau limestone: *Iowa Acad. Sci. Proc.*, vol. 23, pp. 113-118, 1916; abstract, *Science*, new ser., vol. 44, pp. 68-69, 1916.
77. Extent and age of Cap-au-Gres fault: *Iowa Acad. Sci. Proc.*, vol. 24, pp. 61-66, 1917.
- 77A. Louisiana vs. Mississippian as a periodic title (abstract): *Science*, new ser., vol. 50, p. 74, 1919.
78. Memorial of Garland Carr Broadhead: *Geol. Soc. America Bull.*, vol. 30, pp. 13-27, portr., March 31, 1919.

- 78A. Stratigraphic delimitation of the St. Louis formation: Iowa Acad. Sci. Proc., vol. 26, pp. 471-475, 1920.
- 79. First mention of the ores of zinc in America: Pan-Am. Geologist, vol. 37, no. 4, pp. 340-341, May, 1922.
- 79A. Eral affiliations of Grassy black shale: Pan-Am. Geologist, vol. 37, no. 4, pp. 307-310, May 1922.
- 79B. Complexity of Peter sandstone: Pan-Am. Geologist, vol. 37, no. 3, pp. 245-246, April, 1922.
- 80. Diastrophic aspect of Aux Vases sandstone: Pan-Am. Geologist, vol. 38, no. 4, pp. 339-348, November, 1922.
- 81. (and Rowley R. R.). Serial affinities of Siluric formations in north-eastern Missouri: Pan-Am. Geologist, vol. 37, no. 2, pp. 131-138, March, 1922.
- 82. Dakotan sandstone in Missouri: Pan-Am. Geologist, vol. 37, no. 3, p. 256, April, 1922.
- 83. Late Paleozoic fossils on summit of Ozarks: Pan-Am. Geologist, vol. 38, no. 3, pp. 263-265, October, 1922.
- 84. Devonian outliers on the Missouri Highlands: Pan-Am. Geologist, vol. 38, no. 3, pp. 271-272, October, 1922.
- 85. Mid-Ordovician nomenclature in Missouri; Devonian unconformity in Arizona; reconstruction of Iowa's geology: Pan-Am. Geologist, vol. 39, no. 1, pp. 67-70, 70-72, February, 1923.
- 86. Metallic content of rocks: Pan-Am. Geologist, vol. 39, no. 3, pp. 201-238, April, 1923.
- 87. Taxonomy of the Mississippian section; Earliest geographic title for the early Carbonic section of Mississippi Valley; Four-group arrangement of early Carbonic terranes: Pan-Am. Geologist, vol. 39, no. 5, pp. 387-390, 395-398, June, 1923.
- 88. Raphael Pumpelly, premier explorer: Pan-Am. Geologist, vol. 40, no. 4, pp. 241-250, 1 pl. (portr.), November, 1923.
- 89. Water table of the loess (abstract): Science, new ser., vol. 57, p. 148, August 24, 1923.
- 89A. Merging of Devonian and Siluric periods: Pan-Am. Geologist, vol. 41, no. 9, pp. 315-316, May, 1924.
- 90. Physiography of Missouri: Pan-Am. Geologist, vol. 42, no. 5, pp. 371-372, December, 1924.
- 91. Early geological explorations of Joseph Nicholas Nicollet in the Mississippi Valley: Pan-Am. Geologist, vol. 43, no. 5, pp. 321-332, portr., June, 1925.
- 92. Charles Joseph Norwood: Mining and Metallurgy, vol. 8, no. 243, p. 154, March, 1927.
- 93. Mississippian series; its synonymy and taxonomy: Pan-Am. Geologist, vol. 48, no. 2, pp. 135-150, 2 pls., September, 1927.
- 94. Pioneer geology of George Clinton Swallow: Pan-Am. Geologist, vol. 49, no. 2, pp. 81-94, 2 pls., (incl. portr.), March, 1928.
- 95. Homogeny in American Carbonic stratigraphy (abstract): Pan-Am. Geologist, vol. 49, no. 2, pp. 117-134, 151-152, 4 figs., 1 pl., March, 1928; Geol. Soc. America Bull., vol. 39, no. 1, p. 198, March 30, 1928.
- 96. Glacial tills and iceberg drifts: Pan-Am. Geologist, vol. 49, no. 5, pp. 369-372, June, 1928.

97. Discordance of Missourian series upon Des Moines coal measures (abstract): *Pan-Am. Geologist*, vol. 49, no. 5, pp. 374-375, June, 1928.
98. Meek's original Plattsmouth terrane; Validity of Marais des Cygnes as terranal title; Lexington formation in Missouri; Synonymy of Broadhead's Atchison shales: *Pan-Am. Geologist*, vol. 50, no. 1, pp. 62-66, 67-69, 70-71, 72-74, August, 1928.
99. Unconformable relations of Bethany limestones: *Iowa Acad. Sci. Proc.*, vol. 35, pp. 219-220, 1 fig., 1929.
100. What shall we do with pre-Cambrian?: *Pan-Am. Geologist*, vol. 53, no. 2, pp. 111-122, 1 fig., 2 pls., March, 1930; abstract, *Iowa Acad. Sci. Proc.*, vol. 39, pp. 277-278, 1930.
101. Taxonomic example of Bethany limestone: *Pan-Am. Geologist*, vol. 53, no. 4, pp. 275-290, 2 pls., May, 1930.
102. Naming of Burlington limestone (abstract): *Iowa Acad. Sci. Proc.* 1930, vol. 37, pp. 273-274, 1931.
- 102A. Carbonic and a standard geologic period: *Pan-Am. Geologist*, vol. 55, no. 1, pp. 35-54, February, 1931.
- 102B. Standard of continental interior sedimentation through the ages: *Pan-Am. Geologist*, vol. 56, no. 5, pp. 347-364, December, 1931.
103. What is the Galena limestone? A curious problem in regional correlation: *Pan-Am. Geologist*, vol. 57, no. 4, pp. 279-296, 3 figs., May, 1932.
104. Plattin and Kimmswick in synonymy in Missouri: *Pan-Am. Geologist*, vol. 58, no. 2, pp. 129-132, September, 1932.
105. Izard dolomite in Missouri: *Pan-Am. Geologist*, vol. 58, no. 2, pp. 145-146, September, 1932.
106. Type locality of Mississippian Osage group: *Pan-Am. Geologist*, vol. 60, no. 5, pp. 361-368, December, 1933.
107. Aux Vases vs. Ferruginous sandstone in Missouri: *Pan-Am. Geologist*, vol. 62, no. 2, pp. 222-223, October, 1934.
- 107A. Midcontinental diastrophism in late Paleozoic times: *Pan-Am. Geologist*, vol. 66, no. 4, pp. 279-306, November, 1936.
- 107B. Mapping unit in geology: *Pan-Am. Geologist*, vol. 67, no. 5, pp. 357-360, June, 1937.
108. Invalidity of Ordovician Prosser term in Missouri: *Pan-Am. Geologist*, vol. 67, no. 1, pp. 67-68, January, 1937.
109. Extension of Missouri's Charette title into Iowa?: *Pan-Am. Geologist*, vol. 67, no. 2, pp. 149-151, 1 fig., March, 1937.
110. Biotic significance of Decorah volcanic ash-bed in Missouri: *Pan-Am. Geologist*, vol. 67, no. 2, pp. 152-156, March, 1937.
111. Extension of Missouri's Lexington formation into Iowa: *Pan-Am. Geologist*, vol. 67, no. 3, pp. 237-240, April, 1937.
112. Missouri period or Missourian series reflected in major sedimental cycle?: *Pan-Am. Geologist*, vol. 67, no. 4, pp. 281-302, 4 pls., May, 1937.
113. Validity of Missourian Forbes limestone in Iowa: *Pan-Am. Geologist*, vol. 67, no. 5, pp. 366-370, June, 1937.
114. Bethany solidarity and the geological formation: *Pan-Am. Geologist*, vol. 68, no. 3, pp. 199-216, 5 pls., incl. index and geol. sketch map, October, 1937.

- 114A. Genetic emendation of Pennsylvanian series: Pan-Am. Geologist, vol. 68, no. 2, pp. 145-149, September, 1937.
- 114B. Synonymy of Carbonic Bethany title: Pan-Am. Geologist, vol. 68, pp. 149-152, September, 1937.
- 114C. Validation of Waubaunsee formation through conditional unconformity: Pan-Am. Geologist, vol. 68, no. 4, pp. 291-294, November, 1937.
- 114D. Redundancy of Sedalia limestone title in Missouri: Pan-Am. Geologist, vol. 68, no. 4, pp. 299-302, November, 1937.
- 114E. Genetic affinities of so-called Sylamore sandstone in central Missouri: Pan-Am. Geologist, vol. 68, no. 5, pp. 364-366, December, 1937.
- 115. Kinship of so-called Fern Glen limestone of Missouri: Pan-Am. Geologist, vol. 68, no. 5, pp. 359-361, December, 1937.
- 115A. Debacle of Williams' Chouteau fauna: Pan-Am. Geologist, vol. 69, no. 5, pp. 365-368, June, 1938.
- 115B. Kinderhook formation at type-section: Pan-Am. Geologist, vol. 70, no. 2, pp. 152-154, September, 1938.
- 115C. Kinderhook centrum; what is it and where: Pan-Am. Geologist, vol. 70, no. 3, pp. 183-196, October, 1938.
- 115D. Extension of Iowan Rockford shales into Missouri: Pan-Am. Geologist, vol. 70, no. 3, pp. 225-227, October, 1938.
- 115E. Some curious incongruities of early Carbonic Meramec division: Pan-Am. Geologist, vol. 70, no. 4, pp. 305-307, November, 1938.
- 115F. Genetic emendation of Chartresan series: Pan-Am. Geologist, vol. 70, no. 5, pp. 363-364, December, 1938.
- 115G. Diastrophic kinship of Warsaw shales formation: Pan-Am. Geologist, vol. 70, no. 4, pp. 289-300, November, 1938.
- 115H. Age of Chattanooga black shales: Pan-Am. Geologist, vol. 70, no. 5, pp. 364-366, December, 1938.
- 116. Aux Vases in basidium function: Pan-Am. Geologist, vol. 70, no. 4, pp. 301-304, November, 1938.
- 117. Exploratory geology of Benjamin Franklin Shumard: Pan-Am. Geologist, vol. 71, no. 1, pp. 1-10, 1 pl. portr., February, 1939.
- 118. Bailey limestone of southeastern Missouri in synonymy: Pan-Am. Geologist, vol. 72, no. 2, pp. 147, 148, September, 1939.
- 118A. Stratigraphic position of great *Graphiocrinus* colony at Kansas City: Pan-Am. Geologist, vol. 71, no. 3, pp. 229-231, April, 1939.
- 119. Beloit limestone in Missouri: Pan-Am. Geologist, vol. 72, no. 4, pp. 312-315, November, 1939.
- 120. Invalidation of Fern Glen terrane of Missouri, Iowa, and Illinois: Pan-Am. Geologist, vol. 71, no. 3, pp. 235-238, April, 1939.
- 121. Burlington limestones of southwestern flanks of Ozarks: Pan-Am. Geologist, vol. 71, no. 5, pp. 369-372, June, 1939.
- 121A. Titular extension of terranal units in geosynclinal sedimentations: Pan-Am. Geologist, vol. 71, no. 5, pp. 373-376, June, 1939.
- 121B. *Graphiocrinus* in America: Pan-Am. Geologist, vol. 71, no. 5, pp. 376-378, June, 1939.
- 121C. Kansas City group in taxonomy: Pan-Am. Geologist, vol. 71, no. 5, pp. 378-380, June, 1939.

- 121D. Geosynclinal theory of sedimental cycle and American Devonian: Pan-Am. Geologist, vol. 72, no. 1, pp. 45-60, August, 1939.
- 121E. Geosynclinal Linnian series of western Devonian: Pan-Am. Geologist, vol. 72, no. 1, pp. 63-65, August, 1939.
122. Callaway limestone of Missouri in Iowa: Pan-Am. Geologist, vol. 72, no. 1, pp. 65-66, August, 1939.
123. Titular synonymy of Sulphur Springs formation of southeast Missouri: Pan-Am. Geologist, vol. 72, no. 1, pp. 66-69, August, 1939.
124. Devonian *Megistocrinus* zone in Missouri: Pan-Am. Geologist, vol. 72, no. 1, pp. 69-70, August, 1939.
125. Recovery of Izard dolomite: Pan-Am. Geologist, vol. 72, no. 3, pp. 223-226, October, 1939.
126. Possible genetic function of Devonian Wittenberg shales of Missouri: Pan-Am. Geologist, vol. 72, no. 3, pp. 227-228, October, 1939.
127. Validity of Clear limestone as formational title in Missouri: Pan-Am. Geologist, vol. 72, no. 3, pp. 232-233, October, 1939.
128. Redundancy of Ordovician Kimmswick title of Missouri: Pan-Am. Geologist, vol. 72, no. 4, pp. 307-310, November, 1939.
- 128A. Beloit limestone in Missouri: Pan-Am. Geologist, vol. 72, no. 4, pp. 312-315, November, 1939.
129. Joseph Granville Norwood, 1807-1895; pioneer state geologist in West: Pan-Am. Geologist, vol. 73, no. 1, pp. 1-10, 2 pls., incl. portr., February, 1940.
130. Membership of Hannibal shales: Pan-Am. Geologist, vol. 73, no. 1, pp. 59-60, February, 1940.
131. No Henrietta coal title for Iowa: Pan-Am. Geologist, vol. 73, no. 4, pp. 299-301, May, 1940.
- 131A. Bainbridge limestone of Missouri in synonymy: Pan-Am. Geologist, vol. 74, no. 1, pp. 63-64, August, 1940.
132. Fantasy of the Osage fauna: Pan-Am. Geologist, vol. 74, no. 4, pp. 297-300, November, 1940.
133. Fallacy of early Carbonian Meramec grouping of Missouri and Illinois: Pan-Am. Geologist, vol. 74, no. 4, pp. 311-316, November, 1940.
134. Missouri equivalent of Cedar Valley limestone (abstract): Iowa Acad. Sci. Proc. 1939, vol. 46, pp. 254-255, June, 1940.
135. Unconformities of Kinderhook: Pan-Am. Geologist, vol. 73, no. 2, pp. 137-140, March, 1940.
136. Northward extension of Saverton shales into Iowa: Pan-Am. Geologist, vol. 73, no. 2, pp. 146-148, March, 1940.
137. Synonymy of Little Saline limestone of Missouri: Pan-Am. Geologist, vol. 73, no. 5, pp. 364-365, June, 1940.
138. Genetic revision of Devonian of Missouri: Pan-Am. Geologist, vol. 74, no. 1, pp. 47-60, 1 fig., August, 1940.
139. Nature of sub-Bethany unconformity in Missouri: Pan-Am. Geologist, vol. 74, no. 4, pp. 303-305, November, 1940.
140. Defense of Missourian: Pan-Am. Geologist, vol. 74, no. 5, pp. 367-372, December, 1940.
141. Taxonomic rank of type Ozarkian section: Pan-Am. Geologist, vol. 75, no. 1, pp. 72-74, February, 1941.

142. Revised chart of geological formations of Missouri: Pan-Am. Geologist, vol. 75, no. 2, pp. 156-157, March, 1941.
143. Revival of Broadhead's Ordovician Charette (Charrette) title in Missouri: Pan-Am. Geologist, vol. 75, no. 3, pp. 231-235, April, 1941.
144. Remnantal Pennsylvanian Coal Measures series in Missouri: Pan-Am. Geologist, vol. 75, no. 3, pp. 235-236, 1 pl., April, 1941.
145. Superfluity of Cambrian Doe Run dolomite title in Missouri: Pan-Am. Geologist, vol. 75, no. 3, pp. 236-239, April, 1941.
146. Fallacy of Kansas City group, basal Missourian section: Pan-Am. Geologist, vol. 75, no. 4, pp. 306-308, May, 1941.
147. Intra-Devonian erosional unconformity in Missouri: Pan-Am. Geologist, vol. 75, no. 4, pp. 310-312, May, 1941.
148. Synonymy of St. Laurents limestone of Missouri: Pan-Am. Geologist, vol. 75, no. 4, pp. 314-316, May, 1941.
149. Invalidity of Cambrian Elvins formation in Missouri: Pan-Am. Geologist, vol. 75, no. 4, pp. 316-318, May, 1941.
150. Correlation of Coal Measures of southwest Missouri: Pan-Am. Geologist, vol. 75, no. 5, pp. 378-379, June, 1941.
151. Outlines of Missouri geology: Pan-Am. Geologist, vol. 75, no. 5, pp. 337-366, 6 pls., incl. geol., relief, and phys. maps, 2 figs., June, 1941; vol. 76, no. 1, pp. 29-52, 1 fig., August, 1941; no. 2, pp. 105-138, 4 pls., incl. tables, September, 1941; no. 3, pp. 185-228, 3 pls. incl. index maps, 3 figs., October, 1941.
152. Old glacial tills of Missouri: Pan-Am. Geologist, vol. 76, no. 1, pp. 57-60, 1 fig., August, 1941.
153. Pre-occupation of Cherokee Coal Measures title in Missouri: Pan-Am. Geologist, vol. 76, no. 1, pp. 68-70, August, 1941.
154. Broadhead's Ordovician Charette (Charrette) limestone applicable in Illinois: Pan-Am. Geologist, vol. 76, no. 1, pp. 70-72, 1 fig., August, 1941.
155. Possible genetic function of Devonian Wittenberg shales of Missouri: Pan-Am. Geologist, vol. 76, no. 4, pp. 316-317, November, 1941.
156. Validity of Broadhead's Atchison shales formation: Pan-Am. Geologist, vol. 76, no. 4, pp. 317-320, November, 1941.
157. Over-naming of Atchison shales formation: Pan-Am. Geologist, vol. 76, no. 5, pp. 376-379, December, 1941.
158. Keyes' Forbes limestone a proper terran title in Missouri, Iowa, Kansas, and Nebraska: Pan-Am. Geologist, vol. 76, no. 5, pp. 379-382, December, 1941.
159. Cambrian Lansingham series of upper Mississippian basin: Pan-Am. Geologist, vol. 75, no. 1, pp. 74-76, February, 1941.
160. Validity of Missourian Linwood shales: Pan-Am. Geologist, vol. 75, no. 5, pp. 367-368, June, 1941.
161. Easternmost extension of western Devonian limestones: Pan-Am. Geologist, vol. 77, no. 1, pp. 78-79, February, 1942.
- 161A. *Cactocrinus proboscideal* a premiere index fossil of Lower Burlington limestone: Pan-Am. Geologist, vol. 77, no. 2, pp. 151-152, March, 1942.
162. Kinship remoteness of Chouteau and Louisiana limestones of Missouri: Pan-Am. Geologist, vol. 77, no. 3, pp. 229-231, April, 1942.

163. *Aulopora gracilis* in synonymy: Pan-Am. Geologist, vol. 77, no. 4, p. 312-313, May, 1942.
164. Possible marine anomaly of Missourian Coal Measures of continental interior: Pan-Am. Geologist, vol. 77, no. 5, p. 373-374, June, 1942.
165. Possible genetic function of Devonian Wittenberg shales of Missouri: Pan-Am. Geologist, vol. 77, no. 5, pp. 376-378, June, 1942.

Keyte, I. A. Refer also to Peck, R. E.

1. The crinoid fauna of the Chouteau formation: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1925.

Kidwell, Albert Laws.

1. The igneous geology of Ste. Genevieve County, Missouri: Washington University, unpublished thesis, 82 pp., 34 figs., St. Louis, Missouri, 1942.

Kilpatrick, J. W.

1. A boulder of copper and glacial striae in central Missouri: Science, vol. 18, pp. 344-345, 1891.

Kimball, J. P.

1. Genesis of iron ores by isomorphous and pseudomorphous replacement of limestone (Treats the Cambrian limestones of Missouri.): Am. Geologist, vol. 8, pp. 352-376, 1891.

King, Henry.

1. Report of a geological reconnaissance of that part of the State of Missouri adjacent to the Osage River: Missouri Eleventh General Assembly, Senate Jour., app., First Session, pp. 458-505, 1840.
2. Geology of the valley of the Mississippi from the southern part of the State of Missouri to the Wisconsin River in the territory of Iowa (abstract): Am. Jour. Sci., 1st ser., vol. 47, pp. 128-130, 1844.
3. A geological survey of the State of Missouri: Western Jour. and Civilian, vol. 3, pp. 12-29, 76-83, 1849.
4. A letter to the Representatives of Missouri in Congress, advocating a School of Mines: Western Jour. and Civilian, vol. 3, p. 226, 1850.
5. Some remarks on the geology of the State of Missouri: Am. Assoc. Adv. Sci. Proc., vol. 5, pp. 182-199, 1851.
6. Some remarks on the geology of the State of Missouri: Western Jour. and Civilian, vol. 8, pp. 228-242, 1852.
7. Report on an examination of the estate belonging to the St. Louis and Birmingham Iron Mining Company (This contains a geological report by King, Dr. H.): By order of the Board, St. Louis. Printed at the St. Louis Times Book and Job Office, 18 pp., 1852.
8. Report on the River, Hinch, Bleeding-Hill and Blanton copper mines: St. Louis, 1853.

9. Report on the lands of the Birmingham Iron Mining Company: St. Louis, 1853.
10. Grand Tower Iron Works, Perry County, Missouri: Pamphlet, 20 pp., New York, 1853.
11. Charter and by-laws of the St. Louis and Birmingham Iron Mining Company together with reports on an examination of the estate (This contains geological reports by King, Dr. H. and Whitney, J. D., and analyses of ore by Jackson, T.): 35 pp., Baker, Godwin and Co., New York, 1853.

Kirk, Edwin.

1. *Eupachycrinus* and related Carboniferous crinoid genera: Jour. Paleontology, vol 11, no. 7, pp. 598-607, 1 pl., October, 1937.
2. *Aphelecrinus*, a new inadunate crinoid genus from the Upper Mississippian: Am. Jour. Sci., vol. 242, no. 4, pp. 190-203, 1944.

Kirkpatric, J. W.

1. Boulder of copper and glacial striae in central Missouri: Science, vol. 18, pp. 344-345, 1891.

Kithel, Karl L.

1. A possible new lead ore area in Missouri: Eng. and Min. Jour., vol. 121, no. 20, p. 801, May 15, 1926.

Kitson, H. W.

1. The mining districts of Joplin and southeast Missouri: Eng. and Min. Jour., vol. 104, no. 25, pp. 1067-73, December, 22, 1917; vol. 105, no. 8, pp. 359-364, February 23, 1918; vol. 105, no. 9, pp. 411-415, March 2, 1918; vol. 105, no. 16, pp. 727-734, April 20, 1918; vol. 105, no. 26, pp. 1153-62, June 29, 1918; (reprinted in) Mining Practices (published by Eng. and Min. Jour.), 12 pp., New York, 1919.

Klem, Mary J.

1. The development of *Agaricocrinus*: St. Louis Acad. Sci. Trans., vol. 10, pp. 167-184, 1900.
2. A revision of the Paleozoic Palaeochinoidea, with a synopsis of all known species: St. Louis Acad. Sci. Trans., vol. 14, pp. 1-98, 1904.

Knapp, Esther Laura.

1. The geography of the flood-plain of the lower Missouri River: Washington University, unpublished thesis, 156 pp., 30 figs., St. Louis, Missouri, 1923.

Knight, James Brookes.

1. Some Pennsylvanian ostracods from the Henrietta formation of eastern Missouri: Jour. Paleontology, vol. 2, no. 3, pp. 229-267, 5 pls., September, 1928.
2. Some Pennsylvanian ostracods from the Henrietta formation of eastern Missouri: Jour. Paleontology, vol. 2, no. 4, pp. 318-377, 2 pls., December, 1928.

3. Pennsylvanian outlier at St. Louis, Missouri, and its correlations (abstract): Geol. Soc. America Bull., vol. 40, no. 1, p. 190, March 30, 1929; Pan-Am. Geologist, vol. 51, no. 1, pp. 69-70, February, 1929.
4. Some Pennsylvanian gastropods and a pelecypod showing color markings (abstract): Geol. Soc. America Bull., vol. 40, no. 1, pp. 212-213, March 30, 1929; Pan-Am. Geologist, vol. 51, no. 3, p. 230, April, 1929.
5. Reconsideration of Zygopleuroid gastropods (abstract): Pan-Am. Geologist, vol. 53, no. 2, p. 156, March, 1930.
6. The ostracode genus *Hollinella*: Jour. Paleontology, vol. 4, no. 4, pp. 417-418, December 1, 1930.
7. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 1, The *Pseudozygopleurinae*: Jour. Paleontology, vol. 4, Sup. 1, 88 pp., 4 figs., 5 pls., 1930.
8. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 2, *Aclisina* and *Streptacis*: Jour. Paleontology, vol. 5, no. 1, pp. 1-15, 1 fig., 2 pls., March, 1931.
9. Genus *Soleniscus* Meek and Worthen (abstract): Geol. Soc. America Bull., vol. 42, no. 1, pp. 358-359, March 31, 1931; Pan-Am. Geologist, vol. 55, no. 2, pp. 154-155, March, 1931.
10. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 3, The Subulitidae: Jour. Paleontology, vol. 5, no. 3, pp. 177-229, 2 figs., 7 pls., September, 1931.
11. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 4, The Pseudomelaniidae: Jour. Paleontology, vol. 6, no. 2, pp. 189-202, 2 pls., June, 1932.
12. *Holopea symmetrica* Hall, genotype of *Holopea* Hall: Washington Acad. Sci. Jour., vol. 22, no. 16, 17, pp. 473-476, 8 figs., October 19, 1932.
13. The location and areal extent of the St. Louis Pennsylvanian outlier: Am. Jour. Sci., 5th ser., vol. 25, no. 145, pp. 25-48, 3 figs., January, 1933; no. 146, pp. 166-178, 2 figs., February, 1933.
14. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 5, The Trocho-Turbinidae: Jour. Paleontology, vol. 7, no. 1, pp. 30-58, 4 pls., March, 1933.
15. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 6, The Neritidae: Jour. Paleontology, vol. 7, no. 4, pp. 359-392, 1 fig., 7 pls., December, 1933.
16. The gastropods of the St. Louis, Missouri, Pennsylvanian outlier; 7, The Euomphalidae and Platyceratidae: Jour. Paleontology, vol. 8, no. 2, pp. 139-166, 7 pls., June, 1934; abstract, Geol. Soc. America Proc., 1933, pp. 372-373, June, 1934.
17. The gastropods of the St. Louis, Missouri Pennsylvanian outlier; 8, The Turritellidae: Jour. Paleontology, vol. 8, no. 4, pp. 433-447, 2 pls., December, 1934.
18. Paleozoic gastropod genotypes: Geol. Soc. America Special Papers, no. 32, 510 pp., 1941.

Knight, M.

1. The geography of Boone County: Historical and economic geography: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1915.

Koch, Albrecht Karl.

1. Remains of the mastodon in Missouri: Am. Jour. Sci., 1st ser., vol. 37, pp. 191-192, 1839.
- 1A. The discovery of the remains of a mastodon in Gasconade County and the evidence of the remains of man contemporaneous with the mastodon: Philadelphia Presbyterian, January 12, 1839; reprinted in Am. Jour. Sci., vol. 36, pp. 198-200, 1839.
2. A short description of fossil remains found in the State of Missouri by the author: 8 pp., il., St. Louis, 1840.
3. Fossil remains: 8 pp., 1 pl. No title page. No name. (This gives an account of the discovery of antediluvian remains made in May, 1831, on the premises of Capt. Palmer, 22 miles south of St. Louis, in Jefferson County; also a description of other large bones disinterred in 1838 in Gasconade County. The pamphlet is evidently by Dr. Koch, and was probably published before 1841. The copy examined is in the St. Louis Public School Library, and was formerly in the library of Dr. Shumard.)
4. Description of the *Missourium*, or Missouri leviathan ... 20 pp., Louisville, Kentucky, 1841. (Also other editions).
5. A description of the *Missourium* or Missouri Leviathan, together with its supposed habits; indian traditions concerning the location from whence it was exhumed; also, comparisons of the whale, crocodile and *Missourium* with the leviathan as described in the 41st Chapter of the Book of Job, 16 pp., St. Louis, 1841.
6. Description of the *Missourium theristocaulodon* (Koch), or Missouri Leviathan (*Leviathan missouriensis*), together with its supposed habits, and Indian traditions concerning the location from whence it was exhumed; also, comparisons of the whale, crocodile and *Missourium* with the leviathan as described in the 41st Chapter of the Book of Job, 23 pp., 1 pl., fourth edition, London; E. Fisher, 33 Cannon Street, 1842.
7. Description of the *Missourium theristocaulodon* (Koch), or Missouri Leviathan (*Leviathan missouriensis*), together with its supposed habits and Indian traditions; also, comparisons of the whale, crocodile and *Missourium* with the leviathan, as described in the 41st Chapter of the Book of Job, 28 pp., fifth edition enlarged, Dublin, 1843.
8. Description of the *Missourium theristocaulodon* (Koch), or Missouri Leviathan... 5th ed., 28 pp., Dublin, 1843.
9. Description of the *Hydrargos sillimanii*: (Koch), a gigantic fossil reptile, or sea-serpent: lately discovered by the author in the State of Alabama, March, 1845. Together with some geological observations made on different formations of the rocks, during a geological tour through the eastern, western and southern parts of the United States, in the years 1844-1845. "By Doctor Albert C. Koch, Corresponding member of the Societies of Halle, and of Dresden, & c." The bones of this monstrous serpent measure 114 feet in length, and weigh seven thousand five hundred pounds. (The author's journey extended into Missouri, and he gave some accounts of the geology and the fossils found.): New York, 16 pp., 1 pl., 1845.

10. Die Riesenthier der Urwelt, oder das neuentdeckte *Missourium theristocaulodon* (Sichelzahn aus Missouri) und die Mastodontiden im allgemeinen und besondern . . . , viii, 99 pp., il., Berlin, 1845; Rev., pp. 760-766, Neues Jahrb. 1845.
11. Lithographic print of the "Missourium", issued at Dresden. (A copy of this rare lithograph is in the Geological Library, Washington Univ., St. Louis, Missouri.)
12. Mastodon remains in the State of Missouri: St. Louis Acad. Sci. Trans., vol. 1, pp. 61-64, 1857.

Koch, Heinrich Louis. Refer also to Tolman, C.

1. The igneous geology of the western half of the St. Francois Mountains: Washington University, unpublished thesis, 81 pp., 27 figs., 8 tables, map in pocket, St. Louis, Missouri, 1932.

Koelker, K. L.

1. Has the Miami-Picher District passed the zenith?: Eng. and Min. Jour., vol. 117, pp. 168-170, 1924.

Koenig, George Augustus.

1. Mineralogical notes (Analysis of barite from St. Louis is given.): Philadelphia Acad. Nat. Sci. Proc., 1876, pp. 36-37, 1876.

Koester, Edward A.

1. Developments in north Mid-continent in 1940 (oil and gas): Am. Assoc. Petroleum Geologists Bull., vol. 25, no. 6, pp. 1103-1113, June, 1941; abstracts, no. 5, p. 945, May, 1941; Oil and Gas Jour., vol. 38, no. 48, pp. 52-53, April, 1940.

Kraus, P. S.

1. The Conodonts of the Grassy Creek shale: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1931.

Krey, F.

1. Structural reconnaissance of the Mississippi Valley area from Old Monroe, Missouri, to Nauvoo, Illinois: Missouri Bur. Geology and Mines, 2d ser., vol. 18, 86 pp., 18 pls., (incl. map), 1924; Illinois State Geol. Survey Bull. 45, 86 pp., 18 pls., (incl. maps) 1924.

Kunz, G. F.

1. American meteorites (A description, with plate, is given of the Taney County meteorite, 1877.): Am. Jour. Sci., 3d ser., vol. 34, pp. 467-478, 1887.

Ladd, George Edgar.

1. Building stones, clays, and sands of Iron, St. Francois, and Madison Cos., Missouri: Missouri Geol. Survey Bull. 1, pp. 22-44, 1890.
2. The clay, stone, lime and sand industries of St. Louis City and County: Missouri Geol. Survey Bull. 3, pp. 5-84, map, 1890.
3. Notes on the clays and building stones of certain western central counties tributary to Kansas City: Missouri Geol. Survey Bull. 5, pp. 43-86, 1891.

4. Notes on certain undescribed clay occurrences in Missouri: *Science*, new ser., vol. 3, pp. 691-693, 1896.
5. Geological phenomena resulting from the surface tension of water: *Am. Geologist*, vol. 22, pp. 267-285, 1898.

Lake, M. C.

1. The iron ore deposits of Iron Mountain: *International Geol. Congress 16th Session, Guidebook 2*, pp. 56-67, 6 figs., Washington, 1932.

Lamar, John E.

1. (and Sutton, A. H.). Cretaceous and Tertiary of Kentucky, Illinois, and Missouri: *Am. Assoc. Petroleum Geologists Bull.*, vol. 14, no. 7, pp. 845-866, 4 figs., July, 1930; abstract, *Pan-Am. Geologist*, vol. 53, no. 3, pp. 214-215, April, 1930.

Landes, Kenneth K. Refer to Tolman, C.

Langendoerfer, M. F.

1. The geography of the Hermann, Missouri Region: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1930.

Lanza, A.

1. (and Higgins, E.). Pulmonary disease among miners in the Joplin District: *U. S. Bureau of Mines Tech. Paper 105*, 1915.

La Røge, Clifford Thomas. Refer also to Perry, T. E.

1. A study of the chemical composition and mineralogical relationships of sphalerite at Silver Mine, Madison County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1932.

Larson, Clarence L.

1. St. Joseph Lead Company prospects a chat pile: *Eng. and Min. Jour.*, vol. 124, no. 7, pp. 249-253, August 13, 1927.

Laudon, Lowell Robert.

1. Mississippian stratigraphy of Iowa and Missouri (abstract): *Tulsa Geol. Soc. Summaries and Abstracts*, 1932,; *Tulsa Daily World*, October 17, 1932.
2. Stratigraphy of northern extension of Burlington limestone in Missouri and Iowa: *Am. Assoc. Petroleum Geologists Bull.*, vol. 21, no. 9, pp. 1158-1167, 4 figs., September, 1937; abstract, *Geol. Soc. America Proc.*, 1936, p. 371, June, 1937.

Lawrence, B.

1. A concise description of the geological formations and mineral localities of the western states; designed as a key to the geological map of the same: 48 pp., Boston, 1843.

Lawrence, H. M.

1. Recent developments in ammonia leaching for zinc ores: *Univ. of Missouri, School of Mines and Met. Bull.*, vol. 10, no. 3, pp. 1-12, Rolla, Missouri, May, 1927.

La Conte, John Lawrence.

1. Plumbo-resinite and cupreous sulphate-carbonate of lead of Missouri: *Am. Jour. Sci.*, 2d ser., vol. 3, p. 117, 1847.
2. Notice of a fossil *Dicotyles* from Missouri. *Philadelphia Acad. Nat. Sci. Proc.*, vol. 6, pp. 5-6, 1852.

Lee, Wallace.

1. The Newburg district (Phelps Co.): *Bienn. Rept. State Geologist*, 1909-10, pp. 55-63, 1911.
2. The geology of the Rolla quadrangle: *Missouri Bur. of Geology and Mines*, 2d ser., vol. 12, 111 pp., 10 pls., 17 figs., 1913.
3. The stratigraphy and structural development of the Forest City basin in Kansas (and Missouri): *Kansas Geol. Survey Bull.* 51, 142 pp., December, 1943.

Leidy, Joseph.

1. Memoir on extinct species of American ox (Mentions specimens from New Madrid and Benton Counties.): *Smithsonian Cont. Knowl.*, vol. 5, pp. 5-20, 5 pls., Washington, 1852.
2. Descriptions of remains of fishes from Carboniferous and Devonian formations of United States: *Philadelphia Acad. Nat. Sci. Jour.*, 2d ser., vol. 3, pp. 159-166, 1856.
3. Descriptions of remains of fishes from Carboniferous limestones of Illinois and Missouri: *Am. Philosophical Soc. Trans.*, new ser., vol. 11, pp. 87-91, 1857.

Leighton, Morris M. Refer to Alden, W. C.

Leith, Charles Kenneth.

1. Silicification of erosion surfaces: *Econ. Geology*, vol. 20, pp. 513-523, 1925.
2. Structures of the Wisconsin and Tri-State lead and zinc deposits: *Econ. Geology*, vol. 27, no. 5, pp. 405-418, August, 1932.

Leonard, A. G. Refer also to Bain, H. F.

1. Origin of Iowa lead and zinc deposits (incidental references to, and comparisons with, the Missouri deposits): *Am. Geologist*, vol. 16, pp. 288-294, 1895.

Leonhard, Alexander V. Refer also to Schmidt, A.

1. Notes on mineralogy of Missouri: *St. Louis Acad. Sci. Trans.*, vol. 4, pp. 440-453, 1884.
2. Occurrence of millerite in St. Louis: *St. Louis Acad. Sci. Trans.*, vol. 4, pp. 493-496, 2 pls., 1894.

Lesquereux, L.

1. On the Cordaites and their related generic divisions, in the Carboniferous formations of the United States (describes three species from "Lower Coal Measures at Clinton"): *Am. Philosophical Soc. Proc.*, vol. 17, p. 315, 1878.
2. Description of the coal flora of the Carboniferous formations in Pennsylvania and throughout the United States: *Pennsylvania Geol. Survey Repts.*, vols. 1 and 2, 1880, and vol. 3, 1884.

Lesuer, Charles Alexander. Refer to Troost, G.

Leverett, Frank.

1. The preglacial valleys of the Mississippi and its tributaries: *Jour. Geology*, vol. 3, pp. 740-763, 1895.
2. The Illinois glacial lobe (St. Louis and Lincoln Counties, Missouri referred to p. 64): *U. S. Geol. Survey Mon.* 38, 817 pp., maps, 1890.
- 2A. Outline of the Pleistocene history of Mississippi Valley: *Jour. Geology*, vol. 29, pp. 615-626, 1921.
3. Glacial deposits of Missouri and adjacent districts (abstract): *Geol. Soc. America Bull.*, vol. 34, no. 1, pp. 91-92, March 30, 1923.
4. Oldest drift in western Illinois and southeastern Missouri in relation to "Lafayette gravel" and drainage development (abstract): *Geol. Soc. America Bull.*, vol. 35, no. 1, p. 69, March 30, 1924; *Pan-Am. Geologist*, vol. 41, no. 2, p. 138, March, 1924.
5. Shifting of the Mississippi River in relation to glaciation: *Geol. Soc. America Bull.*, vol. 53, pp. 1283-1298, 1942.

Levorsen, A. I.

1. Convergence studies in the Mid-Continent region: *Am. Assoc. Petroleum Geologists Bull.*, vol. 11, no. 7, pp. 657-682, July, 1927.
2. Pennsylvanian overlap in the United States: *Am. Assoc. Petroleum Geologists Bull.*, vol. 15, no. 2, pp. 113-148, February, 1931.

Lewis, J. L.

1. Fossil remains in southwest Missouri: *Kansas City Rev. Sci.*, vol. 4, p. 207, 1880.

Lewis, Meriweather.

1. (and Clark, William). The travels of Capts. Lewis and Clark: (Swallow in 1st and 2d Annual Reports, part 1, p. 209 quotes their estimate of lead production in Missouri): Philadelphia, Pennsylvania, 1809.
2. (and Clark, William). Travels to source of Missouri River and across the American continent to Pacific Ocean, performed by order of the government of the United States in the years 1804, 1805 and 1806. (The physical features of the state are described.): London, 1814.

Liberg, Carl.

1. Silica sand producer uses modern methods and supplies a full time market: *Pit and Quarry*, vol. 19, no. 3, pp. 89-90, November 6, 1929.

Litton, A.

1. Preliminary report on principal mines in Franklin, Jefferson, Washington, St. Francois, and Madison Cos., Missouri: *Missouri Geol. Survey, First and Second Ann. Repts.*, pt. 2, pp. 1-94, Jefferson City, Missouri, 1855.
2. Belcher and Brothers' artesian well (St. Louis, Missouri): *St. Louis Acad. Sci. Trans.*, vol. 1, pp. 80-86, pl., 1857.

Lix, H. W.

1. The composition and occurrence of Linnaeite (Siegenite): Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1935.

Lloyd, E.

1. (and Banmann, D.). The mineral wealth of southwest Missouri, 64 pp., Joplin, Missouri, 1874.

Lochman, Christina.

1. Fauna of the basal Bonnetterre formation of Missouri (abstract): Geol. Soc. America Proc., 1933, pp. 335-336, June, 1934.
- 1A. New trilobite genera from the Bonnetterre dolomite of Missouri: Jour. Paleontology, vol. 10, pp. 35-43, 1936.
2. Corrections to the basal Bonnetterre fauna: Jour. Paleontology, vol. 14, no. 5, p. 515, September, 1940.
- 2A. Fauna of the basal Bonnetterre dolomite of southeastern Missouri: Jour. Paleontology, vol. 14, pp. 1-53, 1940.
3. A pathologic pygidium from the upper Cambrian of Missouri: Jour. Paleontology, vol. 15, no. 3, pp. 324-325, 3 figs., May, 1941.

Locke, J.

1. Lead regions of upper Mississippi, with remarks on geology of the west (References are made to the geology of Missouri.): Am. Jour. Sci., 1st ser., vol. 42, pp. 147-149, 1842.

Lodwich, Llewelyn.

1. A comparison of Missouri sandstones: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1914.

Long, Edgar C.

1. Reopening an abandoned Tri-State zinc mine, Waco, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 20 pp., charts, diagrams, Rolla, Missouri, 1939.

Long, S. H.

1. Account of an expedition from Pittsburg to Rocky Mountains, performed in years 1819 and 1820 (incidental references to Missouri geology): Two vols., Philadelphia, Pennsylvania, 1823.

Lonsdale, Elston Holmes.

1. Southern extension of Cretaceous in Iowa: Iowa Acad. Sci. Proc., vol. 1, pt. 4, pp. 39-43, Des Moines, Iowa, 1894.
2. Topography of granite and porphyry region of Missouri: Iowa Acad. Sci. Proc., vol. 1, pt. 4, pp. 43-48, Des Moines, Iowa, 1894.
3. Upper Carboniferous of southwestern Iowa: Iowa Acad. Sci. Proc., vol. 2, pp. 197-200, Des Moines, Iowa, 1895.

Lord, N. H.

1. Chemical analyses of Missouri coal: U. S. Geol. Survey Bull. 261, pp. 48-49, 1905.
2. Chemical analyses of Missouri coal: U. S. Geol. Survey Prof. Paper 48, pt. 1, pp. 235-238, 271, 1906.

3. Experimental work conducted in the chemical laboratory of the U. S. fuel testing plant at St. Louis, Missouri, January 1, 1905, to July 31, 1906: U. S. Geol. Survey Bull. 323, 49 pp., 1907.
4. Chemical analyses of Missouri coal: U. S. Geol. Survey Bull. 332, pp. 167, 169, 171, 172, 1908.
5. (and others). Chemical analyses of Missouri coal with descriptions of mine and field samples collected between July 1, 1904, and June 30, 1910: U. S. Bur. Mines Bull. 22, pp. 114-124, and 562-581, 1913.

Loughbridge, Robert Hills.

1. Outline of the physical geography of the State of Missouri: U. S. 10th Census, vol. 5, pp. 505-519, 1884.

Luedeking, C.

1. (and Wheeler, H. A.). Notes on a Missouri barite: Am. Jour. Sci., 3d ser., vol. 42, pp. 496-498, 1891.

Lyden, J. P. Refer to Fowler, G. M.

Lyell, Sir Charles.

1. A second visit to the United States. "In this work the learned author has given a very instructive description of the 'Earthquake region about New Madrid'" (Quotation from Swallow), 2 vols., 273, 287 pp., New York, London, 1849; 2d edition, 2 vols., London, 1855; 3d edition, London, 1855.

Lykins, W. H. R.

1. Kansas City fossils: Kansas City Rev. Sci., vol. 7, p. 113, 1883.
2. List of fossils in Kansas City and vicinity: Kansas City Rev. Sci., vol. 8, pp. 72-77, 1884.

Lyman, K. Refer to Park, E. J.

McAdams, William.

1. A new vertebrate from the St. Louis limestone: Am. Assoc. Adv. Sci. Proc., vol. 32, p. 269, 1883; Science, vol. 2, p. 327, 1883.

McChesney, J. H.

1. Description of some new species of fossils from the Paleozoic rocks of the western states (Describes species from Pennsylvanian of Missouri.): Chicago Acad. Sci. Trans., vol. 1, 96 pp., 1859.

McCourt, W. E.

1. (and Albertson, M., and Bennett, J. W.). The geology of Jackson County: Missouri Bur. of Geology and Mines, 2d ser., vol. 14, 157 pp., map, 1917.

McCoy, A. W.

1. Artesian water in Missouri: Univ. of Missouri, Eng. Exp. Sta. Bull., vol. 4, no. 3, pp. 1-73, Columbia, Missouri, September, 1913; Univ. of Missouri, thesis, Columbia, Missouri, 1914.

McCuskey, E. W.

1. Tri-State flood control cuts mining pumping: *Eng. and Min. Jour.*, vol. 136, no. 7, pp. 319-322, July, 1935.

Macelwane, James B. Refer also to Bradford, D. C.

1. Progress in the study of earthquakes in the New Madrid region: *Missouri Acad. Sci. Proc.*, vol. 1, p. 131, 1935.

Macfarlane, James. Refer also to Broadhead, G. C.

1. Coal regions of America; their topography, geology and development (An account of the Missouri coal region is given on pages 469-477.): 680 pp., New York, 1873.
2. Earthquake at New Madrid, Missouri in 1811 probably not an earthquake: *Am. Assoc. Adv. Sci. Proc.*, vol. 32, pp. 220-222, 1883.

McGee, W. J.

1. Notes on geology of Macon County, Missouri: *St. Louis Acad. Sci. Trans.*, vol. 5, pp. 305-336, 1888.
2. Pleistocene history of northeastern Iowa (incidental references are made to Missouri geology): *U. S. Geol. Survey 11th Ann. Rept.*, pp. 199-567, 1891.

McGehee, Rex. Refer to Weller, J. M.

McKnight, E. T.

1. Zinc and lead deposits of northern Arkansas: *U. S. Geol. Survey Bull.* 853, 311 pp., 11 pls., 1935.
2. Structural relations of the lead-zinc deposits of northern Arkansas: *Geol. Soc. America, Special Papers*, no. 24, pp. 60-65, 1939.

McLaughlin, K. P.

1. Interpretation of the Dutchtown conodont fauna: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1941.

Maclure, William.

1. Observations on geology of the United States of America (On the Missouri part of the map the coloration is all for Secondary sedimentary rocks.): *Am. Philosophical Soc. Trans.*, new ser., vol. 1, pp. 1-92, 1818.

McManamy, Lyle. Refer to Davis, W. E.; Farrar, W.; and Stewart, D. R.

McNair, Alexander.

1. Lead mines and saline: Report of Alexander McNair, Register for the District of St. Louis, Missouri, United States 14th Congress, 2d session, no. 248, vol. 3, pp. 235-238, 1805.

McQueen, Henry Silliman. Refer also to Buehler, H. A.; Greene, F. C.; Smith, A. F.; Stewart, D. R.; and Workman, L. E.

1. (and Forbes, C. R.). Mining of diaspore and flint fire clays in Missouri: *Mining and Metallurgy*, vol. 9, pp. 271-275, 10 figs., June, 1928.

2. Mineral production of Missouri: Missouri Bur. Geology and Mines, 55th Bienn. Rept. State Geologist, 1927-28, pp. 23-92, 1929.
3. Clay and coal resources of the Perry area: Missouri Bur. Geology and Mines, 55th Bienn. Rept. State Geologist, 1927-28, app. 3, pp. 102-112, 2 pls., incl. map, 1929.
4. Geologic relations of the diaspore and flint fire clays of Missouri: Am. Ceramic Soc. Jour., vol. 12, no. 10, pp. 687-697, October, 1929.
5. Insoluble residues as a guide in stratigraphic studies: Missouri Bur. Geol. and Mines, 56th Bienn. Rept. State Geologist, 1929-30, app. 1, pp. 102-131, 12 pls., 1931; also preprinted in 1930.
6. Geology of seven dam sites on Meramec, Big and Bourbeuse Rivers: U. S. 71st Congress, 3d session, House of Representative Document No. 686, pp. 76-80, 1930.
- 6A. Mineral resources of Missouri: Missouri Bur. Geol. and Mines, 55th Bienn. Rept. State Geologist, 1927-28, pp. 23-85, 1929.
7. Mineral production of Missouri: Missouri Bur. Geol. and Mines, 56th Bienn. Rept. State Geologist, 1929-1930, pp. 36-98, 1931.
8. (and Grohskopf, J. G.). Mineral production of Missouri: Missouri Bur. Geol. and Mines, 57th Bienn. Rept. State Geologist, 1931-32, pp. 32-46, 1933.
- 8A. Economic application of the insoluble residue method: Am. Inst. Min. Met. Eng. Tech. Pub. 724, 12 pp., 1936; Trans., vol. 126, pp. 530-540, 1937.
9. (and Schrenk, W. R., and Stout, E. L.). Occurrence of strontium minerals in Perry and Cape Girardeau Counties, Missouri: Missouri Geol. Survey and Water Resources, 59th Bienn. Rept. State Geologist, 1935-36, app. 7, 11 pp., 1937.
10. The Dutchtown, a new lower Ordovician formation in southeastern Missouri: Missouri Geol. Survey and Water Resources, 59th Bienn. Rept. State Geologist, 1935-36, app. 1, 27 pp., 5 pls. and index map, 1937.
11. (and Aid, Kenneth). Rock wool resources in central Missouri: Missouri Geol. Survey and Water Resources, 59th Bienn. Rept. State Geologist, 1935-36, app. 2, 24 pp., 5 pls. incl. maps, 1937.
12. (and Green, F. C.). The geology of northwestern Missouri: Missouri Geol. Survey and Water Resources, 2d ser., vol. 25, 217 pp., 7 pls., incl. geol., isopach and contour maps, 11 figs., incl. index and contour maps, 1938.
13. Geology of the Forest City Basin: Tulsa Geol. Soc. Digest, 1939-1940, p. 14, 1940.
14. (and Hinchey, Norman S.). The Lincoln fold in Lincoln, Pike and Ralls Counties, northeastern Missouri: Kansas Geol. Soc. Guidebook, 15th Ann. Field Conf., pp. 99-110, 3 figs., and maps, 1941.
15. Occurrence of dolomite in the Fredericktown area Madison Co., Missouri: Missouri Geol. Survey and Water Resources, 62d Bienn. Rept. State Geologist, 1941-42, app. 2, 16 pp., map and section, 1943.

16. Geology of the fire clay districts of east central Missouri, with chapters on the results of X-ray analyses of the clays and the results of firing behavior tests, by Herold, P. G.: *Missouri Geol. Survey and Water Resources*, 2d ser., vol. 28, 250 pp. 39 pls. incl. index and isopach and geol. maps, 6 figs. incl. index map, 31 tables, 1943.

Maddox, G. C.

1. Late Cretaceous and Cenozoic changes of level in the Ozark region: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1925.

Magness, Catherine Virginia.

1. Some minerals in St. Louis and vicinity: Washington University, unpublished thesis, 93 pp., 9 pl., 15 figs., St. Louis, 1934.

Malcolmson, C. T.

1. Briquetting tests of Missouri coal: *U. S. Geol. Survey Bull.* 332, p. 173, 1908.

Mansfield, G. R.

1. (and Boardman, Leona). Nitrate deposits of the United States: *U. S. Geol. Survey Bull.* 838, p. 37, 1932.

Marbut, Curtis Fletcher.

1. The geographic development of Crowley's Ridge (Missouri, Arkansas): *Boston Soc. Nat. History Proc.*, vol. 26, pp. 479-488, 1895.
2. Dictionary of altitudes (of Missouri): *Missouri Geol. Survey*, vol. 8, pp. 225-316, 1895.
3. Physical features of Missouri: *Missouri Geol. Survey*, vol. 10, pp. 14-109, pls. 1-11, figs. 1-19, 1896.
4. Geology of the Calhoun sheet (Henry and Benton Cos., Missouri): *Missouri Geol. Survey*, vol. 12, pt. 2, pp. 108-191, figs., 7-17, and geologic map and cross section, 1898.
5. Geology of Clinton sheet (Henry Co., Missouri): *Missouri Geol. Survey*, vol. 12, pt. 2, pp. 20-104, 6 figs., and geologic map and cross section, 1898.
6. Geology of the Huntsville quadrangle, including portions of Randolph, Howard and Chariton Counties: *Missouri Geol. Survey*, vol. 12, pt. 2, pp. 312-371, figs. 30-37, and geologic map, 1898.
7. Geology of the Lexington sheet, Ray, Carroll and LaFayette Cos.: *Missouri Geol. Survey*, vol. 12, pt. 2, pp. 196-247, figs. 18-23, geologic map and cross sections, 1898.
8. Geology of the Richmond quadrangle, including portions of Ray and Carroll counties: *Missouri Geol. Survey*, vol. 12, pt. 2, pp. 252-308, figs. 24-29, and geologic map and cross sections, 1898.
9. Cote Sans Dessein (Missouri), and Grand Tower (Illinois): *Am. Geologist*, vol. 21, pp. 86-90, maps, 1898.
10. The evolution of the northern part of the lowlands of southeastern Missouri: *Univ. of Missouri Studies*, vol. 1, nos. 3, 8, 63 pp., maps, 1902.

11. Development of the southeastern Missouri lowlands (abstract): Science, new ser., vol. 16, p. 262, 1902; Geol. Soc. America Bull., vol. 14, p. 10, 1903.
12. Sandstones of the Ozark region in Missouri (abstract): Science, new ser., vol. 17, p. 291, 1903.
13. Geology and physiography (of Missouri): The State of Missouri.... (Louisiana Purchase Exposition, Paris), pp. 63-70, map, Columbia, Missouri, 1904.
14. ... physiography of the Ozark region in Missouri (abstract): Science, new ser., vol. 19, p. 527, 1904.
15. The geology of Morgan Co.: Missouri Bur. Geol. and Mines, 2d ser., vol. 7, 97 pp., map, 1908.
16. A preliminary report on the general character of the soils and the agriculture of the Missouri Ozarks: Univ. of Missouri, Agri. Exp. Sta., Research Bull. 3, pp. 151-273, map, June 1910.
17. Geology: Univ. of Missouri Bull., Sci. Ser., vol. 1, pp. 125-146, 1913.
18. (and others). Soils of the United States (edition, 1913): U. S. Dept. Agri., Bur. Soils Bull. 96, 791 pp., 1913.
19. Characteristics of the soil and its relation to geology (abstract): Geol. Soc. America Bull., vol. 27, pp. 114-115, 1916.

Marcou, John Belknap. Refer to Marcou, J.

Marcou, Jules.

1. Resume explicatif d'une carte geologique des Etats Unis. (incidental mention to geology of Missouri): Bull. Soc. Geol. de France, tome 12, p. 813, Paris, 1855.
2. Une reconnaissance geologique au Nebraska (Remarks are made on the correlation of the Carboniferous in northwestern part of the state.): Bull. Soc. Geol. France, (2), tome 21, pp. 132-146, Paris, 1864.
3. (and Marcou, John Belknap). Mapoteca geologica Americana (list of geological maps of Missouri, especially p. 127 et ses.): U. S. Geol. Survey Bull. 7, 184 pp., Washington, 1884.

Markham, E. O.

1. The geology of the Sturgeon quadrangle: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1919.

Markley, J. H.

1. Geology of parts of the Bonfils (subsequently called St. Charles) and Alton quadrangles in Missouri: Washington University, unpublished thesis, 99 pp., front., il., 24 pl., fig., map, St. Louis, Missouri, 1926.

Marshall, R. B.

1. Results of spirit leveling Missouri, 1896 to 1909, inclusive: U. S. Geol. Survey Bull. 439, 48 pp. 1 pl., 1911.

Marshall, Willis Woodbury.

1. Geography of the early part of St. Louis: Washington University, unpublished thesis, 128 pp., 26 figs., St. Louis, Missouri, 1932.

Marsteller, J. W.

1. Nineteenth annual report of the Bureau of Mines and Mine inspection of the State of Missouri embracing reports on coal, lead, zinc and other mines, year ending December 31, 1905, 518 pp., pls., Jefferson City, Missouri, 1906.
2. Twentieth annual report of the Bureau of Mines and Mine inspection of the State of Missouri embracing reports on coal, lead, zinc and other mines, year ending December 31, 1906, 423 pp., pls., 6 charts, 1907.
3. Twenty-first report of the Bureau of Mines and Mine inspection of the State of Missouri embracing reports on coal, lead, zinc and other mines, year ending December 31, 1907, 437 pp., 12 charts, 1 map, 1908.

Martin, Falkland H.

1. (and others). Memorial to the fifteenth General Assembly of Missouri, concerning a geological survey of the state: Hist. and Phil. Soc., 18 pp., 1849.

Marx, C. W.

1. (and Schweitzer, Paul). The heating value and proximate analyses of Missouri coals: Univ. of Missouri Bull., Eng. Exp. Sta. series, vol. 2, no. 1, 1911, Marked "A reprint"; Original: Univ. of Missouri, Columbia, Missouri, pp. 1-10, 1 fig., 1901.

Mason, Charles Clifford.

1. The loess in St. Louis and St. Louis County, Missouri: Washington Univ., unpublished thesis, front., 59 pp., il., 23 pls., St. Louis, Missouri, 1928.

Mason, C. Y.

1. Water and northwest Missouri: Econ. Geography, vol. 17, no. 4, pp. 389-398, 1941.

Mathews, D.

1. Natural history of Jasper County, including its topography, its hydrography; its geological formations, etc.: History of Jasper County, Missouri, pp. 137-150, 1883.

Mathias, H. E.

1. Pyrite concretions in the Pennsylvanian shales: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1924.

Matthes, Francois Emile.

1. How the Mississippi came to break through Crowley's Ridge (abstract): Assoc. Am. Geographers Annals, vol. 21, no. 2, pp. 131-132, June 1931.
2. The Pleistocene diversion of the Mississippi River across Crowley's ridge, southeastern Missouri (abstract): Science, new ser., vol. 77, pp. 459-460, May 12, 1933; Washington Acad. Sci. Jour., vol. 23, no. 12, pp. 572-573, December 15, 1933; Geol. Soc. America Proc., 1933, pp. 96-97, June 1934.

3. Cretaceous sediments in Crowley's Ridge, southeastern Missouri: *Am. Assoc. Petroleum Geologists Bull.*, vol. 17, no. 8, pp. 1003-1015, 1 fig., August, 1933.

Mathias, Henry Edwin.

1. Syngenetic origin of pyrite concretions in the Pennsylvanian shales of north-central Missouri: *Jour. Geology*, vol. 36, no. 5, pp. 440-450, July-August 1928.

Maughas, M. M.

1. Paper before the Missouri Historical and Philosophical Society: 1853.
2. Geological resources of Missouri ("This paper gives us a somewhat detailed description of the rocks in those portions of Callaway and Montgomery Counties drained by the Loutre and Aux Vases Rivers." Quotation from Swallow, 1st and 2d Ann. Rept., Missouri Geol. Survey, 1855): *Western Jour. and Civilian*, vol. 9, p. 382, 1855.

Maveety, R. H.

1. (and Irwin, J. S.). Topography and geology of the Panther Bluffs area: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1911.

Maxwell, Riley G.

1. The Warsaw formation in the vicinity of St. Louis, Missouri: Washington University, unpublished thesis, 49 pp., front., il., 11 figs., St. Louis, Missouri, 1929.

Maxwell, Ross Allen. Refer to Ball, J. R.

May, Lawrence. Refer to Walsh, F. H.

Mayes, Roy.

1. Technical problems of the marble and cut stone industry: *Mineral Indus. Conf. Proc.*, Rolla, Missouri, 1938, pp. 66-67, Rolla, Missouri, 1940.

Meade, W.

1. Description and analyses of ores and lead from Louisiana (Ste. Genevieve, Missouri): *Am. Mineral Jour.*, vol. 1, no. 1, pp. 7-10, 1814.

Meckfessel, Erwin C. F.

1. The bromine and iodine content of certain saline ground waters of Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 46 pp., tables, graph, fold. maps, Rolla, Missouri, 1935.

Meek, Fielding Bradford. Refer also to Worthen, Amos H.

1. Report on Moniteau County: First and Second Ann. Repts. of Missouri Geol. Survey, pt. 2, pp. 97-119, 1855.

2. Catalogue of the fossils of Missouri: First and Second Ann. Repts. of Missouri Geol. Survey, pt. 2, pp. 215-226, 1855.
3. (and Worthen, A. H.). Description of new species of Crinoidea and Echinoidea from the Carboniferous rocks of Illinois and other western states: Philadelphia Acad. Nat. Sci. Proc., pp. 379-397, 1860.
4. (and Worthen, A. H.). Description of new Paleozoic fossils from Illinois and Iowa: Philadelphia Acad. Nat. Sci. Proc., pp. 128-148, 1861.
5. (and Worthen, A. H.). Remarks on age of Goniatite limestone at Rockford, Indiana, and its relations to the black slate of the western states and to some of the succeeding rocks above the latter: Am. Jour. Sci., 2d ser., vol. 32, pp. 167-178, 1861.
6. (and Worthen, A. H.). Contributions to paleontology of Illinois and other western states: Philadelphia Acad. Nat. Sci. Proc., 1865, pp. 254-274, 1865.
7. (and Worthen, A. H.). Descriptions of new species of Crinoidea from Paleozoic rocks of Illinois and adjoining states: Philadelphia Acad. Nat. Sci. Proc., 1865, pp. 143-155, 156-167, 1865.
8. Remarks on the Carboniferous and Cretaceous rocks of eastern Kansas and Nebraska: Am. Jour. Sci., 2d ser., vol. 39, pp. 157-174, 1865.
9. Observations on the microscopic shell structure of *Spirifer cuspidatus* Sowerby and some similar American forms: Philadelphia Acad. Nat. Sci. Proc., p. 275, 1865.
10. Descriptions of Paleozoic fossils from the Silurian, Devonian, and Carboniferous rocks of Illinois and other western states: Chicago Acad. Sci. Proc., vol. 1, pp. 11-23, 1866.
11. (and Worthen, A. H.). Contributions to paleontology of Illinois and other western states: Philadelphia Acad. Nat. Sci. Proc., 1866, pp. 251-276, 1866.
12. Geology of Illinois ... Sub-Carboniferous limestone: Illinois Geol. Survey, vol. 1, pp. 40, 77, 284-292, 305-308, 1866.
13. (and Worthen, A. H.). Description of invertebrates from Carboniferous system: Illinois Geol. Survey, vol. 2, pp. 143-423, 1866.
14. (and Worthen, A. H.). Contributions to the paleontology of Illinois and other western states: Philadelphia Acad. Nat. Sci. Proc., pp. 251-423, 1868.
15. (and Worthen, A. H.). Paleontology of Illinois: Illinois Geol. Survey, vol. 3, pt. 2, pp. 289-565, 1868.
16. Notes on some points in the structure and habits of Paleozoic Crinoidea: Philadelphia Acad. Nat. Sci. Proc., 1868, pp. 323-334, 1869, Am. Jour. Sci., 2d ser., vol. 48, pp. 23-40, 1869; Can. Naturalist, new ser., vol. 4, pp. 434-452, 1869.
17. Notice of a new brachiopod from the lead-bearing rocks at Mine LaMotte, Missouri: Philadelphia Acad. Nat. Sci. Proc., pp. 185-187, 1871.
18. Description of some new types of Paleozoic shells: Am. Jour. Conchology, vol. 7, pp. 4-10, 1871.
19. Descriptions of invertebrates from Carboniferous system: Illinois Geol. Survey, vol. 5, pp. 321-619, 1873.
20. (Geological report on) Miller County: Missouri Geol. Survey Report, 1855-1871, pp. 112-134, 1 map, 1873.

21. (Geological report on) Morgan County: Missouri Geol. Survey Report, 1855-1871, pp. 135-156, 1 map, 1873.
22. (Geological report on) Saline County: Missouri Geol. Survey Report, 1855-1871, pp. 157-188, 1873.
23. A report on some of the invertebrate fossils of the Waverly group and Coal Measures of Ohio: Ohio Geol. Survey Rept., vol. 2, 400 pp., 1875.
24. Description of fossil invertebrates: Illinois Geol. Survey, vol. 8, pp. 69-154, 1890.

Mehl, Maurice Goldsmith. Refer to Branson, E. B., and Weller, S.

Meinzer, Oscar Edward.

1. Large springs in the United States: U. S. Geol. Survey Water Supply Paper 557, pp. 17-27, 1927.

Meleen, Elmer E.

1. The Pennsylvanian formations in the vicinity of St. Louis, Missouri: Washington University, unpublished thesis, 95 pp., front., il., 13 figs., St. Louis, Missouri, 1929.

Melton, Frank A.

1. Post-Pennsylvanian denudation of the Ozark dome: Am. Jour. Sci., 5th ser., vol. 21, pp. 214-219, March, 1931.
2. Time equivalent versus lithologic extension of formations: Am. Assoc. Petroleum Geologists Bull., vol. 16, no. 10, pp. 1039-1043, 1 fig., May, 1931.

Merchant, Frank E. Refer also to Kerocher, R. E.

1. Some Fusulinids from the Missouri series of Kansas: Jour. Paleontology, vol. 13, pp. 594-614, 1939.

Merrill, George Perkins.

1. Collection of building and ornamental stones in U. S. National Museum: Smithsonian Inst., Ann. Rept. 1886, pt. 2, pp. 278-648, Washington, 1889.
2. Stones for building and decoration (numerous references to Missouri stone): one volume, 453 pp., New York, 1891.
3. A newly found meteoric iron from Perryville, Perry Co., Missouri: U. S. Nat. Mus. Proc., vol. 43, pp. 595-597, 1912.
4. A heretofore undescribed meteoric stone from Kansas City, Missouri: U. S. Nat. Mus. Proc., vol. 55, pp. 95-96, 2 pls., 1919.

Merrill, W. E.

1. Report on Missouri tin ores: Eng. and Min. Jour., vol. 4, p. 373, 1867.

Mesler, R. D. Refer to Siebenthal, C. E.

Meyer, Charles.

1. The geology of the Pilot Knob, Missouri iron mineralization: Washington University, unpublished thesis, 206 pp., 74 figs., St. Louis, Missouri, 1939.

2. (and Tolman, C.). Structural geology of the felsites of Iron Mountain, Missouri (abstract): *Geol. Soc. America Bull.*, vol. 50, no. 12, pt. 2, pp. 1922-1923, December 1, 1939.

Meyer, Dorothy Babcock.

1. A sericite of unusual composition: *Am. Mineralogist*, vol. 20, no. 5, pp. 384-388, 1 fig., May, 1935.

Meyer, F. C.

1. The probable origin of the ore deposits in the mines of Missouri: *Kansas City Scientist*, vol. 5, pp. 82-85, 1891.

Miller, Arthur K. Refer also to Ulrich, E. O.

1. (and Dunbar, C. O., and Condra, G. E.). The nautiloid cephalopods of the Pennsylvanian system in the Midcontinent region: *Nebraska Geol. Survey Bull.* 9, 2d ser., 240 pp., 32 figs., 24 pls., 1933.
2. (and Owen, John Britts). Cherokee nautiloids of the northern Midcontinent region: *Iowa Univ. Studies in Nat. History*, vol. 16, no. 3, pp. 187-272, 7 figs., 12 pls., August 1, 1934.
3. Devonian ammonoids of America (abstract): *Geol. Soc. America Proc.* 1934, p. 361, June, 1935.
4. Burlington goniatites: *Am. Jour. Sci.*, 5th ser., vol. 30, no. 179, pp. 432-437, 3 figs., November, 1935.
5. Devonian ammonoids of America: *Geol. Soc. America Special Paper* 14, 262 pp., 39 pls., 41 figs., August 31, 1938.
6. (and Furnish, W. M.). Lower Mississippian Nautiloid cephalopods of Missouri, in *Stratigraphy and paleontology of the Lower Mississippian of Missouri*, pt. 2: *Univ. of Missouri Studies*, vol. 13, no. 4, pp. 149-178, 11 pls., 2 figs., October 1, 1938.
7. (and Owen, J. B.). An ammonoid fauna from the lower Pennsylvanian Cherokee formation of Missouri: *Jour. Paleontology*, vol. 13, no. 2, pp. 141-162, 4 pls., 9 figs., March, 1939.
8. (and Furnish, W. M.). Studies of Carboniferous Ammonoids: *Jour. Geology*, vol. 14, no. 4, pp. 356-377, 5 pls., 17 figs., July, 1940.

Miller, B. K. Refer to Bradley, R. S.

Miller, C. J.

1. A petrographic study of the Warsaw formation of the St. Louis area: Unpublished thesis, St. Louis University, St. Louis, Missouri, 1939.

Miller, Samuel Almond.

1. Descriptions of two new species from Niagara group, and five from Keokuk group (Species of fossils from Missouri are described.): *Cincinnati Soc. Nat. Hist. Jour.*, vol. 2, pp. 254-260, 1 pl., 1880.
2. *Glyptocrinus* refined and restricted, *Gaurocrinus*, *Pycnocrinus* and *Compsocrinus* established, and two new species described (*Gaurocrinus splendens* is described from Cape Girardeau): *Cincinnati Soc. Nat. Hist. Jour.*, vol. 6, pp. 217-230, 1883.

3. Description of new and remarkable crinoids and other fossils of Hudson River group, and notice of *Strotocrinus bloomfieldensis*: Cincinnati Soc. Nat. Hist. Jour., vol. 4, pp. 69-78, 1884.
4. North American geology and paleontology (The geology of Missouri is considered in a number of places.): 644 pp., Cincinnati, Ohio, 1889.
5. North American geology and palaeontology for the use of amateurs, students and scientists. (The geology of Missouri is described on pages 33, 41, 45, 58, 59, 61 and 66-67.): 664 pp., il., Cincinnati, Ohio, 1889.
6. (and Gurley, W. F. E.). Description of some new genera and species of Echinodermata from Coal Measures and sub-Carboniferous rocks of Indiana, Missouri and Iowa: Cincinnati Soc. Nat. Hist. Jour., vol. 13, pp. 3-25, 1890.
7. (and Gurley, W. F. E.). Description of some new genera and species of Echinodermata from Coal Measures and sub-Carboniferous rocks of Indiana, Missouri and Iowa (first 27 pages same as article of same title which appeared in journal of the Cincinnati Society Natural History, vol. 12): Pamphlet, 59 pp., 10 pls., Cincinnati, Ohio, 1890.
8. Description of lower Carboniferous crinoids from Missouri: Missouri Geol. Survey Bull., vol. 4, 40 pp., 5 pls., 1891.
9. Paleontology (describes corals from Pennsylvanian of Missouri): Indiana Dept. Geol. and Nat. Hist., 17th Ann. Rept., pp. 611-705, pls. 1-20, 1892.
10. (and Faber, C.). Description of some sub-Carboniferous cephalopods (Describes *Goniatites missouriensis* from the upper Coal Measures near Kansas City.): Cincinnati Soc. Nat. Hist. Jour., vol. 14, pp. 164-169, 1892.
11. (and Gurley, W. F. E.). Description of some new species of invertebrates from Paleozoic rocks of Illinois and adjacent states: Illinois State Mus. Nat. Hist. Bull., vol. 3, 81 pp., 8 pls., Springfield, Illinois, 1893.
- 11A. (and Gurley, W. F. E.). Upper Devonian and Niagara crinoids: Illinois State Mus. Nat. Hist. Bull. 4, 37 pp., il., 1894.
12. (and Gurley, W. F. E.). New genera and species of Echinodermata (Species from *Sedalia* are described.): Illinois State Mus. Nat. Hist. Bull., vol. 5, 52 pp., 5 pls., Springfield, Illinois, 1894.
13. (and Gurley, W. F. E.). New and interesting species of Paleozoic fossils (Describes crinoid and other fossils from Pennsylvanian of Missouri.): Illinois State Mus. Nat. Hist. Bull., vol. 7, 89 pp., pls. 1-5, Springfield, Illinois, 1895.
14. (and Gurley, W. F. E.). Description of new and remarkable fossils (crinoids) from Paleozoic rocks of Mississippi valley: Illinois State Mus. Nat. Hist. Bull., vol. 8, 66 pp., 5 pls., Springfield, Illinois, 1896.
15. (and Gurley, W. F. E.). New species of crinoids from Illinois and other states (Several species are described from Missouri.): Illinois State Mus. Nat. Hist. Bull., vol. 9, 66 pp., Springfield, Illinois, 1896.

16. (and Gurley, W. F. E.). New species of echinoderms and new crustacean from Paleozoic rocks (Fossils are described from Missouri.): Illinois State Mus. Nat. Hist. Bull., vol. 10, 91 pp., Springfield, Illinois, 1896.
17. (and Gurley, W. F. E.). New species of Paleozoic invertebrates (mollusks) from Illinois and other states: Illinois State Mus. Nat. Hist. Bull., vol. 11, 50 pp., il., Springfield, Illinois, 1896.
18. (and Gurley, W. F. E.). New species of crinoids, cephalopods, and other Paleozoic fossils (Describes fossils from Pennsylvanian of Missouri.): Illinois State Mus. Nat. Hist. Bull., vol. 12, 69 pp., 5 pls., Springfield, Illinois, 1897.

Mills, Anna Campbell.

1. An historical interpretation of the geography of the nuclei of St. Louis: Washington University, unpublished thesis, 58 pp., 7 pls., St. Louis, Missouri, 1933.

Mills, J. E.

1. Geological report on the Mine La Motte estate, the property of Hon. Rowland Hazard, situated in St. Francois and Madison counties, Missouri, with accompanying map and diagrams, 51 pp., G. W. & C. B. Colton and Co., New York, 1877.

Milton, Charles. Refer to Singewald, J. T. Jr.

Minger, William C.

1. Illustrations of the treatment of nickeliferous ores at Mine La Motte, Madison County, Missouri: Univ. of Missouri, School of Mines and Metallurgy, unpublished thesis, Rolla, Missouri, 1876.

Minor, J. Refer to Babcock, E. N.

Miser, H. D. Refer also to Purdue, A. H.

1. Devonian system in Arkansas and Oklahoma; symposium on Devonian stratigraphy: Illinois State Geol. Survey Bull. 68, pp. 122-139, 1944.

Missouri State Planning Board.

1. A state plan for Missouri, water plan 1938: Works Progress Administration cooperation with Missouri State Planning Board, Water Resources Committee (planographed).

Moldenke, Richard.

1. Cupola tests on coke made from Missouri coal: U. S. Geol. Survey Bull. 332, p. 168, 1908.
2. Cupola tests on coke from Missouri coal: U. S. Geol. Survey Bull. 336, pp. 66, 69, 70, 72, 74, 1908.

Monroe, C. J. Refer to Buehler, H. A.

Moore, E. W. J. Refer to Bisat, W. S.

Moore, George E.

1. Refractory clays of Missouri: *Compass*, vol. 17, no. 2, pp. 91-95, 4 figs., January, 1937.
2. Stratigraphy of the Columbia quadrangle (abstract): *Missouri Acad. Sci. Proc.*, vol. 5, no. 4, p. 133, 1940; Univ. of Missouri, thesis, Columbia, Missouri, 1938.

Moore, G. P.

1. The Devonian of Ralls County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1920.

Moore, P. N.

1. Iron ores of southeastern Missouri: *Missouri Geol. Survey, Field work of 1873-74*, pp. 638-671, Jefferson City, Missouri, 1874.

Moore, Raymond Cecil. Refer also to *Kansas Geol. Soc. Guidebooks*.

1. The stratigraphy of the Kinderhook group in western Illinois and Missouri (abstract): *Illinois Acad. Sci. Trans.*, vol. 9, p. 211, 1917.
 - 1A. Early Mississippian formations of the type region along the Mississippi River in Iowa, Illinois and Missouri (abstract): *Geol. Soc. America Bull.*, vol. 34, pp. 128-129, 1923.
2. Early Mississippian formations in Missouri: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 12, 283 pp., 13 pls., 1928.
 - 2A. Sedimentation cycles in the Pennsylvanian of the northern Mid-Continent region (abstract): *Geol. Soc. America Bull.*, vol. 41, pp. 51-52, 1930.
 - 2B. Pennsylvanian cycles in the northern Mid-Continent region: *Illinois State Geol. Survey Bull.* 60, pp. 247-257, 1931.
3. Early Osage, Mississippian, beds of the Ozark region (abstract): *Geol. Soc. America Bull.*, vol. 44, pt. 1, pp. 203-204, February 28, 1933.
 - 3A. Stratigraphic classification of the Pennsylvanian rocks of Kansas: *State Geol. Survey of Kansas, Bull.* 22, 256 pp., 1935.
 - 3B. The Mississippian system in the upper Mississippi Valley region: *Kansas Geol. Soc. Guidebook*, 9th Ann. Field Conf., pp. 239-243, 1935.
 - 3C. Pennsylvanian and lower "Permian" rocks of the Kansas-Missouri region: *Kansas Geol. Soc. Guidebook*, 10th Ann. Field Conf., pp. 7-73, 1936.
 - 3D. "Carboniferous" rocks of North America (with discussion): 16th *International Geol. Cong. Rept.*, 1933, vol. 1, pp. 593-616, 1936.
4. Relationships of the family Allagecrinidae, with description of new species from the Pennsylvanian rocks of Oklahoma and Missouri: *Denison Univ. Bull.*, vol. 40, no. 10, pp. 55-137, 2 pl., 199 figs., August, 1940.
5. Early growth stages of Carboniferous microcrinoids and blastoids: *Jour. Paleontology*, vol. 14, no. 6, pp. 572-583, November, 1940.

Morey, Philip S.

1. Ostracoda from the basal Mississippian sandstone in central Missouri: *Jour. Paleontology*, vol. 9, no. 4, pp. 316-326, 1 pl., June 1935; Univ. of Missouri, thesis, Columbia, Missouri, 1933.

2. Ostracoda from the Chouteau formation of Missouri: *Jour. Paleontology*, vol. 10, no. 2, pp. 114-122, 1 pl., March, 1936.

Morse, W. C.

1. New Madrid earthquake craters: *Seismol. Soc. America Bull.* 31, no. 4, pp. 309-319, 7 figs., top. map, 1941.

Moseley, William S.

1. Paper on the lead mines of the South-west: *Western Jour. and Civilian*, vol. 4, p. 412, 1847 (?).

Muilenberg, Garrett A. Refer also to Cullison, J. H.; Goldich, S. S.; and Farnham, F. C.

1. (and Goldrich, S. S.). Petrography and petrology of the Mount Devon diabase porphyry: *Am. Jour. Sci.*, 5th ser., vol. 26, no. 153, pp. 355-367, 1 fig., 2 pls., September, 1933.

Mundt, H. W.

1. Automatic water sampler: *Missouri Bur. Geol. and Mines*, 55th Bienn. Rept. of the State Geologist, 1927-28, app. 2, pp. 100-101, 1929.

Murdock, J. N.

1. The physical composition of the Sylamore sandstone: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1931.

Murphy, Thomas D.

1. A study of the basal Cherokee in the Rolla area: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1929.

Neathing, Foster S.

1. The Oklahoma-Kansas-Missouri zinc-lead field: *Eng. and Min. Jour.*, vol. 122, no. 16, pp. 604-608, October 16, 1926.
2. Ores of the Joplin region (discussion): *Eng. and Min. Jour.*, vol. 123, no. 14, p. 575, April 2, 1927.

Nason, Frank Lewis. Refer also to Winslow, Arthur.

1. The iron ores of Missouri: *Inter-State Min. Convention Proc.*, pp. 57-65, December, 1891.
2. A report on the iron ores of Missouri: *Missouri Geol. Survey*, vol. 2, pp. 1-366, map, Jefferson City, Missouri, 1892.
3. The magnesian series of the Ozark uplift: *Am. Geologist*, vol. 11, pp. 91-94, 1893.
4. The correct succession of the Ozark series; a review reviewed: *Am. Geologist*, vol. 12, pp. 141-147, 1893.
5. On the presence of a limestone conglomerate in the lead region of St. Francois Co., Missouri: *Am. Jour. Sci.*, 4th ser., vol. 11, p. 396, 1901.
6. The geological relations and the age of the St. Joseph: *Am. Jour. Sci.*, 4th ser., vol. 12, pp. 358-361, 1901; *Eng. and Min. Jour.*, vol. 73, p. 861, 1902.

7. The disseminated lead ores of southeast Missouri: Eng. and Min. Jour., vol. 73, pp. 478-480, 1902.
8. The bearing of the theories of the origin of magnetic iron ores on their possible extent: Am. Inst. Min. Met. Eng. Bull., vol. 67, pp. 695-708, 1912; Trans., vol. 43, pp. 291-304, 1913.
9. The disseminated lead district of southeast Missouri (discussion): Eng. and Min. Jour., vol. 97, pp. 1158-1159, 1914.
10. Characteristics of zinc deposits in North America (with discussion by Buehler, H. A., and Boyd, J. T.): Am. Inst. Min. Met. Eng. Bull., vol. 125, pp. 799-824, 1917; Trans., vol. 57, pp. 830-862, 1918.

Nebel, M. L. Refer to Savage, T. E.

Nelson, Gaylord.

1. Tripoli deposits at Seneca, Missouri: Mining World, vol. 31, p. 552, Chicago, Illinois, 1909.

Netzeband, William F. Refer also to Bowles, J. H. and Crabtree, E. H.

1. The role of geology in prospecting for lead and zinc in the Tri-State district: Univ. of Missouri, School Mines and Met., unpublished thesis, Rolla, Missouri, 1927.
- 1A. Relation of fracture zones to ore bodies in the Tri-State District: Mining and Metallurgy, vol. 9, pp. 446-447, October, 1928.
- 1B. An example of mining zinc and lead ore at Picher, Oklahoma: Eng. and Min. Jour., vol. 127, no. 20, pp. 792-797, May, 1929.
- 1C. An example of prospecting and valuing a lead-zinc deposit: Eng. and Min. Jour., vol. 127, no. 23, pp. 913-916, June, 1929.
- 1D. Profit from mineral waste, Tri-State tailings yield commercial products: Eng. and Min. Jour., vol. 138, no. 5, pp. 251-254, May, 1937.
- 1E. (and Gray, H. O.). An open-pit zinc-lead mine in the Tri-State District: Eng. and Min. Jour., vol. 146, no. 6, pp. 52-55, June, 1939.
2. Technical problems of the Tri-State zinc-lead mining district: Mineral Industries Conf. Proc., Rolla, Missouri, 1938, pp. 24-30, Rolla, Missouri, 1940.

Neuman, L. M. Refer to Tarr, W. A.

Newberry, John Strong. Refer also to Worthen, A. H.

1. Notes on surface geology of basin of Great Lakes (incidental references to Missouri): Boston Soc. Nat. Hist. Proc., vol. 9, pp. 42-47, 1862.
2. (and Worthen, A. H.). Descriptions of new species of vertebrates, mainly from sub-Carboniferous limestone and Coal Measures of Illinois (describes species from Missouri): Illinois Geol. Survey, vol. 2, pp. 9-141, 13 pls., Springfield, Illinois, 1866.
3. Surface geology of basin of Great Lakes, and valley of Mississippi: New York Lyceum Nat. Hist. Annals, vol. 9, pp. 213-235, 1869; Am. Naturalist, vol. 4, pp. 193-215, 1870.

4. (and Worthen, A. H.). Descriptions of fossil vertebrates (Missouri forms are noted): Illinois Geol. Survey, vol. 4, pp. 434-474, 4 pls., Springfield, Illinois, 1870.
5. Origin and classification of ore deposits (The lead deposits of Missouri are given as typical examples of the occurrence of minerals in gash-veins.): Eng. and Min. Jour., vol. 29, pp. 421-422, 437-438, 1880.
6. Genesis of ores of iron: Columbia Univ., School of Mines Quart., vol. 1, pp. 87-104, New York, 1880,
7. Genesis of iron ores (The iron ores of Missouri are considered to be Huronian and of the same age as those of Lake Superior.): Eng. and Min. Jour., vol. 31, pp. 286-287, 298-300, New York, 1881.
8. Paleozoic fishes of North America (Mention made of species from Missouri.): U. S. Geol. Survey Mon. 16, 228 pp., 1889.

Newell, Norman Dennis. Refer also to Jewett, J. M.

1. (and Jewett, J. M.). The geology of Johnson, Miami and Wyandotte Cos., Kansas: State Geol. Survey of Kansas Bull. 21, 205 pp., 1935.
2. (and Keroher, R. P.). The fusulinid, *Wedekindellina* in mid-Pennsylvanian rocks of Kansas and Missouri: Jour. Paleontology, vol. 11, no. 8, pp. 698-705, 1 pl., 4 figs., December 1937; abstract, Geol. Soc. America Proc. 1936, p. 357, June, 1937.
3. Late Paleozoic pelecypods: Pectinacea: Kansas Geol. Survey, vol. 10, 123 pp., 20 pls., 42 figs., 1937.

Newhouse, W. H.

1. The composition of vein solutions as shown by liquid inclusions in minerals: Econ. Geology, vol. 27, pp. 419-436, 1932.
2. The temperature of formation of the Mississippi Valley lead-zinc deposits: Econ. Geology, vol. 28, pp. 744-750, 1933.

Newton, Henry.

1. The ores of iron; their geographical distribution and relation to the great centers of the world's iron industries: Am. Inst. Min. Eng. Trans., vol. 3, pp. 360-391, 1875.

Nicholson, Frank.

1. A review of the Ste. Genevieve copper deposit: Am. Inst. Min. Eng. Trans., vol. 10, pp. 444-456, 1882.

Nickels, John Milton. Refer also to Weeks, F. B.

1. (and Bassler, R. S.). Synopsis of American fossil Bryozoa, including bibliography and synonymy: U. S. Geol. Survey Bull. 173, 633 pp., 1900.
2. Geologic literature on North America (Bibliography) 1785-1918, with subject index: U. S. Geol. Survey Bulls. 746 and 747; 858 and 1167 pp., 1922.
3. Bibliography of North American geology 1919-1928, with subject index: U. S. Geol. Survey Bull. 823, 1005 pp., 1911.

Note: Subsequent bulletins containing bibliographies for years 1929-1932 by John M. Nickels have been combined with those for the years 1933-1938 by Emma M. Thom in U. S. Geol. Survey Bull. 937 (parts 1 and 2) under the latter authorship.

Nicollet, Joseph Nicolas.

1. Report intended to illustrate a map of hydrographical basin of upper Mississippi River, (Information is given in regard to the rocks of the Mississippi and Missouri Rivers.): Twenty-sixth Cong., 2d sess., Sen. Doc., vol. 5, pt. 2, no. 237, 168 pp., Washington, 1841.
2. On the geology of the region of the upper Mississippi and the Cretaceous formation of the upper Missouri: *Am. Jour. Sci.*, 1st ser., vol. 41, pp. 180-182, 1841.
3. Mineral region of State of Missouri: *Am. Jour. Sci.*, 1st ser., vol. 45, pp. 340-341, 1843.

Nicolson, C. W.

1. Recent improvements in the mining practice of the Tri-State District: *Am. Inst. Min. Met. Eng. Tech. Pub.* 905, 17 pp., May, 1938.

Nininger, Harvey Harlow.

1. The meteorite fall of August 10, 1932, near Archie, Cass County, Missouri: *Pop. Astronomy*, vol. 44, no. 2, pp. 93-97, February, 1936; *Soc. Research on Meteorites Contr. fasc.* 2, 1936, pp. 6-10, January, 1937.
2. The Baxter (Stone Co.) meteorite: *Science*, new ser., vol. 87, no. 2254, p. 234, March 11, 1937.
3. The meteorite which penetrated a roof at Baxter, Missouri: *Pop. Astronomy*, vol. 46, no. 7, pp. 407-409, 2 figs., August-September, 1938; *Soc. Research on Meteorites Contr.*, vol. 2, no. 1, pp. 53-55, 2 figs., 1938.

Nipher, F. E.

1. Account of a fossil from Pike County: *The Western*, vol. 2, p. 181, 1876.
2. Sand at St. Louis used in making plate glass: *The Western*, vol. 3, p. 306, 1877.
3. Magnetic survey of Missouri: *Am. Jour. Sci.*, 3d ser., vol. 21, pp. 310-312, 1881.

Noe, Adolf Carl.

1. Pennsylvanian flora of northern Illinois: *Illinois Geol. Survey Bull.* No. 52, 18 pp., 45 plates, 1925.

Norwood, Charles Joseph. Refer also to Broadhead, G. C.

1. List of fossils from the Coal Measures of Missouri, collected in 1872: *Missouri Geol. Survey, Prelim. Rept. Iron Ores and Coal Fields*, 1872, pt. 2, pp. 416-420, 1873.
2. Coal Measures (of Jasper Co.): *Missouri Geol. Survey, Rept. on field work of 1873-4*, pp. 92-96, 1874.

3. Report on Vernon Co.: Missouri Geol. Survey, Rept. on field work of 1873-4, pp. 139-154, 1874.
4. Coal Measures (of Howard Co.): Missouri Geol. Survey, Rept. on field work of 1873-4, pp. 201-221, 1874.
5. Putnam Co.; Schuyler Co.: Missouri Geol. Survey, Rept. on field work of 1873-4, pp. 272-302, 1874.

Norwood, Joseph Granville.

1. (and Owen, D. D.). Description of a remarkable fossil echinoderm (*Melonites multipora*) from the limestone formation of St. Louis, Missouri: Am. Jour. Sci., 2d ser., vol. 2, pp. 225-228, il., 1846.
2. Geological report of a survey of portions of Wisconsin and Minnesota . . . in Owen, D. D., Report of a geological survey of Wisconsin, Iowa, and Minnesota (Map includes Missouri to the Missouri River.): pp. 209-418, Philadelphia, Pennsylvania, 1852.
3. (and Pratten, Henry). Notice of *Producti* found in the western states and territories, with descriptions of twelve new species: Philadelphia Acad. Nat. Sci. Jour., 2d ser., vol. 3, pp. 5-22, il., 1855.
4. (and Pratten, Henry). Notice of the genus *Chonetes*, as found in the western states and territories, with descriptions of eleven new species: Philadelphia Acad. Nat. Sci. Jour., 2d ser., vol. 3, pp. 23-31, il., 1855.
5. (and Pratten, Henry). Notice of fossils from the Carboniferous series of the western states, belonging to the genera *Spirifer*, *Bellerophon*, *Pleurotomaria*, *Macrocheilus*, *Natica*, and *Loxonema*, with descriptions of eight new characteristic species: Philadelphia Acad. Nat. Sci. Jour., 2d ser., vol. 3, pp. 71-77, il., 1855.
6. Report of progress of the State Geological Survey from Aug. 30, 1871 to March 13, 1872: Missouri 26th General Assembly, Jour. of the House, Adj. Sess., 1871, pp. 926-930, 1872.

Nuttall, Thomas.

1. Journal of travels into Arkansas Territory during year 1819: One Volume, 296 pp., Philadelphia, Pennsylvania, 1821.
2. Observations on geological structure of valley of Mississippi: Philadelphia Acad. Nat. Sci., vol. 2, pp. 14-52, 1821.

Oakes, Malcolm C.

1. Upper Desmoinesian and Lower Missourian rocks in northeastern Oklahoma and southeastern Kansas: Am. Assoc. Petroleum Geologists Bull., vol. 27, pp. 632-650, 1943.

O'Brien, M. L.

1. Collecting geodes in Missouri: Mineralogist, vol. 9, no. 4, pp. 136-138, April, 1941.

Ockerman, John W.

1. Subsurface studies in northeastern Kansas. Kansas Geol. Survey Bull. 20, 78 pp., 13 pls., 4 figs., 1935.

Oefelein, Rosalie T.

1. A mineralogical study of loess near St. Charles, Missouri: *Jour. Sedimentary Petrology*, vol. 4, no. 1, pp. 36-44, 4 figs., April, 1934.

O'Harra, B. Marvel. Refer also to Fowler, G. M.

1. A bibliography on the electrothermic metallurgy of zinc: Univ. of Missouri, School of Mines and Met. Bull., vol. 6, no. 2, pp. 1-65, March, 1922.
2. (and Wheeler, E. S.). Experiments on the distillation of zinc from zinc-lead-silver areas: Univ. of Missouri, School of Mines and Met. Bull., vol. 6, No. 4, pp. 1-44, August, 1923.
3. Briquetting of zinc ores: Univ. of Missouri, School of Mines and Met. Bull., vol. 7, no. 4, pp. 16-67, 13 figs., August, 1924.
4. (and Zeller, G. A.). Reduction of zinc oxide by carbon: Univ. of Missouri, School of Mines and Met. Bull., vol. 8, no. 1, pp. 1-32, figs. and charts, November, 1924.
5. Bibliography on zinc retorts and condensers: Univ. of Missouri, School of Mines and Met. Bull., vol. 8, no. 4, pp. 1-15, August, 1925.

Ohle Ernest L.

1. The geology of the Ozark Lead Mine, Fredericktown, Missouri: Washington University unpublished thesis, 148 pp., 42 figs., St. Louis, Missouri, 1940.
2. Zones of alteration in the Bonneterre formation at the Ozark Lead Mine, Fredericktown, Missouri (abstract): *Missouri Acad. Sci. Proc.*, vol. 6, no. 4, p. 83, March, 1941.

Ohmann-Dumesnil, A. H.

1. Illustration of the concentration and flintshire furnace treatment of lead ores at the Desloge Mines, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1877.

Olson, E. C.

1. A late Pleistocene fauna from Herculaneum, Missouri: *Jour. Geology*, vol. 48, no. 1, pp. 323-357, 1 pl., 10 figs., index map, 1940.

Olson, W. S.

1. The range of brachiopods in the Cherokee formation near Columbia, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1931.

O'Meara, Robert G.

1. A specific gravity study of some of the southeast Missouri lead ores and tailings: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1926.

Orton, Edward, Jr.

1. The kaolin deposits of Bollinger Co., Missouri: *Am. Ceramic Soc. Trans.*, vol. 9, pp. 62-94, 1907.

Osborn, William G.

1. Geologic aspect of the Forest City Basin: *Oil and Gas Jour.*, vol. 37, no. 34, pp. 12-13, 22, 2 figs., incl. geol. sketch map, January 5, 1939.
2. The Forest City Basin: A comparison with the Illinois Basin: *Oil and Gas Jour.*, vol. 37, pp. 27-29, 34, August 11, 1938.

Osgood, F. D. Refer to Fieldner, A. C.

Owen, David Dale. Refer also to Norwood, J. G.

1. Geological exploration of part of Iowa, Wisconsin and Illinois in 1839 (one of the earliest publications proposing a geological classification of the Missouri rocks): 28th Cong., 1st sess., Senate Ex. Doc. 407, 191 pp., il., maps, 1844; Mineral lands of the United States, U. S. 26th Cong., 1st sess., House of Representatives, Ex. Doc., no. 239, pp. 9-115, Washington, 1840.
2. Regarding human footprints in solid limestone (Indian carvings found in St. Louis): *Am. Jour. Sci.*, 1st ser., vol. 43, pp. 18-32, il., 1842.
3. Geology of western states of North America (incidental references to Missouri): *London Geol. Soc. Proc.*, vol. 4, pp. 1-4, London, 1843; *Philosophical Mag.*, 3d ser., vol. 23, pp. 180-183, London, 1843.
4. Abstract of introduction to final report on geological surveys made in Wisconsin, Iowa and Minnesota (incidental references are made to the geology of Missouri): *Am. Assoc. Adv. Sci. Proc.*, vol. 5, pp. 119-132, 1851.
5. Description of Carboniferous rocks in Iowa, including that of coal field west of the Mississippi lying partly in Iowa and partly in Missouri (incidental references to Missouri, pp. 90-140): *Geol. Survey Wisconsin, Iowa and Minnesota*, 38 and 638 pp., Philadelphia, Pennsylvania, 1852.
- 5A. Remarks on stone slabs containing supposed imprints of human feet: *Philadelphia Acad. Nat. Sci. Proc.*, vol. 6, p. 106, 1852.
6. Catalogue of geological specimens collected by D. D. Owen: *Smithsonian Rept.* 9, for 1854, pp. 393-396, 1855.
7. Geological reconnaissance of northwestern counties of Arkansas (The lead bearing formations of Missouri are described.): *Arkansas Geol. Survey, First Ann. Rept.* pp. 105-109, Philadelphia, Pennsylvania, 1858.

Owen, John Butts. Refer to Miller, Arthur K.

Owen, Luella Agnes.

1. Cave regions of the Ozarks and Black Hills: 228 pp., Cincinnati, Ohio, 1898.
2. The bluffs of the Missouri River: *Int. Geog. Congress VII, Verhandlungen* pt. 2, pp. 686-690, 1901.
3. The loess at St. Joseph: *Am. Geologist*, vol. 33, pp. 223-228, map, 1904; (abstract) *Science*, new ser., vol. 19, p. 523, 1904.
4. Evidence on the deposition of loess: *Am. Geologist*, vol. 35, pp. 291-300, 1905.
5. Later studies in the loess: *Pan-Am. Geologist*, vol. 45, pp. 377-382, 1926.

Paige, Sidney.

1. Memorandum on the Missouri earthquake of April 9, 1917: *Missouri Weather Rev.*, vol. 45, p. 318, 1917.

Palmer, Ernest J.

1. The mines and minerals of the Tri-State district: *Rocks and Minerals*, vol. 14, no. 2, pp. 35-49, 4 figs., incl. index map, February, 1939.

Park, Emma J.

1. Winoka gravels, supposed Tertiary deposits, origin of deposits: *Bull. Bradley Geol. Field Sta., Drury College*, vol. 1, pt. 1, pp. 14-19, Springfield, Missouri, 1904.
2. (and others). The Springfield water supply, description of springs, geology of region and chemical analysis: *Bull. Bradley Geol. Field Sta., Drury Coll.*, vol. 1, pt. 2, pp. 45-52, 1905.
3. (and Lyman, K.). The Hannibal formation in Greene County Missouri: *Bull. Bradley Geol. Field Sta., Drury Coll.*, vol. 1, pt. 2, pp. 79-89, Springfield, Missouri, 1905.

Parker, Edward Wheeler.

1. Coal production in Missouri in 1889-1890: *Mineral Resources U. S. for 1889 and 1890*, pp. 147, 170, 226-228, 1892.
2. Coal production in Missouri in 1891: *Mineral Resources U. S. for 1891*, pp. 180 et seq., 261-268, 1893.
3. Coal production in Missouri in 1892: *Mineral Resources U. S. for 1892*, pp. 267, et seq., 423-424, 1893.
4. Coal production in Missouri in 1893: *Mineral Resources U. S. for 1893*, pp. 190 et seq., 312-320, 1894.
5. Coal production in Missouri in 1894: *U. S. Geol. Survey 16th Ann. Rept.*, pt. 3, pp., 7 et seq., 139-144, 1895.
6. Coal production in Missouri in 1895: *U. S. Geol. Survey 17th Ann. Rept.*, pt. 3, pp. 287 et seq., 449-454, 1896.
7. Coal production in Missouri in 1896: *U. S. Geol. Survey 18th Ann. Rept.*, pt. 5, pp. 354 et seq., 545-551, 1897.
8. Coal production in Missouri in 1897: *U. S. Geol. Survey 19th Ann. Rept.*, pt. 6, pp. 278 et seq., 449-456, 1898.
9. Coal production in Missouri in 1898: *U. S. Geol. Survey 20th Ann. Rept.*, pt. 6, pp. 300 et seq., 436-440, 1899.
10. Coal production in Missouri in 1899: *U. S. Geol. Survey 21st Ann. Rept.*, pt. 6, pp. 325 et seq., 464-468, 1901.
11. Coal production in Missouri in 1900: *Mineral Resources U. S. for 1900*, pp. 276 et seq., 402-405, 1901.
12. Coal production in Missouri in 1901: *Mineral Resources U. S. for 1901*, pp. 287 et seq., 398-403, 1902.
13. Coal production in Missouri in 1902: *Mineral Resources U. S. for 1902*, pp. 293 et seq., 392-395, 1903.
14. Coal production in Missouri in 1903: *Mineral Resources U. S. for 1903*, pp. 353 et seq., 480-484, 1904.
15. Coal production in Missouri in 1904: *Mineral Resources U. S. for 1904*, pp. 385 et seq., 507-512, 1905.
16. Coal production in Missouri in 1905: *Mineral Resources U. S. for 1905*, pp. 459 et seq., 625-630, 1906.

17. Coal production in Missouri in 1906: Mineral Resources U. S. for 1906, pp. 571 et seq., 692-695, 1907.
18. Coal production in Missouri in 1907: Mineral Resources U. S. for 1907, pp. 13 et seq., 145-149, 1908.
19. (with Burrows, J. S.). Field work on Missouri coal samples collected for the fuel testing plant at St. Louis: U. S. Geol. Survey Bull. 332, pp. 167, 169, 170, 172, 1908.
20. Coal production in Missouri 1908: Mineral Resources U. S. for 1908, pp. 15 et seq., 134-138, 1909.
21. Coal production in Missouri in 1909: Mineral Resources U. S. for 1909, pp. 14 et seq., 135-138, 1911.
22. Coal production in Missouri in 1910: Mineral Resources U. S. for 1910, pp. 13 et seq., 151-154, 1911.
23. Coal production in Missouri in 1911: Mineral Resources U. S. for 1911, pp. 14 et seq., 149-152, 1912.
24. Coal production in Missouri in 1912: Mineral Resources U. S. for 1912, pp. 10 et seq., 144-147, 1913.

Parker, F. Y.

1. Geology and improvement on Osage River: Military Eng., vol. 21, pp. 40-41, January-February, 1929.
2. Occurrence and characteristics of Missouri River cutoffs: Eng. News-Record, vol. 104, pp. 1042-1045, June 26, 1930.

Parker, J. D.

1. Fall of meteorite in Kansas City, Missouri, in June, 1878: Am. Jour. Sci., 3d ser., vol. 12, p. 316, 1876.

Parker, Nathan H.

1. The Missouri handbook, embracing a full description of the State of Missouri; her agricultural, mineralogical and geological character; her water courses, timber lands, soil and climate; ... location of valuable mines and mineral lands: 162 pp., 12 fig., map of the state, P. M. Pinckard, 78, 80 Pine Street, St. Louis, 1865.

Paulette, R. J.

1. (and Kellyn, J. L.). Geology of the Beaver quadrangle: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1912.

Peale, Albert C.

1. Lists and analyses of the mineral springs of the United States: A preliminary study (This contains references to the mineral springs of Missouri on pages 164-170.): U. S. Geol. Survey Bull. 32, 235 pp., 1886.

Pease, G.

1. Brief statements respecting mineral deposits in the states of Missouri and Illinois: 12 pp., Boston, 1839.

Peck, Raymond Elliot.

1. Blastoids from the Chouteau limestone (abstract): Geol. Soc. America Bull., vol. 40, no. 1, p. 245, March 30, 1929; Univ. of Missouri, thesis, Columbia, Missouri, 1928.

2. Late Paleozoic and early Mesozoic Charophyta: Am. Jour. Sci., 5th ser., vol. 27, pp. 49-55, January, 1934.
3. The North American trochiliscoids, Paleozoic Charophyta: Jour. Paleontology, vol. 8, no. 2, pp. 83-119, 2 figs., 5 pls., June, 1934; abstract, Geol. Soc. America Proc. 1933, p. 331, June, 1934; Univ. of Missouri, thesis, Columbia, Missouri, 1932.
4. Growth stages of *Allagecrinus americanus* Rowley: Jour. Geology, vol. 43, no. 7, pp. 765-770, 11 figs., October-November, 1935.
5. Lower Mississippian microcrinoids from the Kinderhook and Osage groups of Missouri: Jour. Paleontology, vol. 10, no. 4, pp. 282-293, 2 pls., June, 1936.
- 5A. Structural trends of the Trochiliscaceae: Jour. Paleontology, vol. 10, pp. 764-768, 1936.
6. Blastoida from the Chouteau of Missouri, in Stratigraphy and paleontology of the lower Mississippian of Missouri, pt. 2: Univ. of Missouri Studies, vol. 13, no. 4, pp. 70-108, 5 pls., October 1, 1938.
- 6A. (and Keyte, I. A.). The Crinoidea of the Chouteau limestone, in Stratigraphy and paleontology of the lower Mississippian of Missouri, pt. 2: Univ. of Missouri Studies, vol. 13, no. 4, pp. 70-108, 5 pls., October 1, 1938.

Peery, Trusten E.

1. (and LaRoge, Clifford Thomas.). A summary of the geology of Missouri: Compass, vol. 11, no. 4, pp. 129-131, May, 1931.
2. The conodonts of the Snyder Creek shale: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1932.
3. The stratigraphy of the western half of the Fulton quadrangle: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Penfield, S. L. Refer to Dana, E. S.

Penrose, R. A. F., Jr.

1. Manganese; its uses, ores and deposits (Numerous references are made to the rocks of Missouri.): Arkansas Geol. Survey Ann. Rept. 1890, vol. 1, 642 pp., 1891.
2. Iron deposits of Arkansas (Refers to Missouri iron deposits.): Arkansas Geol. Survey Ann. Rept. 1892, vol. 1, 138 pp., maps and plates, 1892.

Perkins, Edwin T.

1. Mining and smelting at Granby, Missouri: Eng. and Min. Jour., vol. 84, pp. 388-390, 1907.

Perry, E. S.

1. Tripoli deposits of Oklahoma: Oklahoma Geol. Survey Bull. 28, 32 pp., 11 pls., 1917.
2. Geologic handbook of the Miami (Oklahoma) mining district; containing a summary of the geologic conditions at Miami, and a brief outline of the formation of the ore bodies: Private Publication, 30 pp., map, 1917.

Perry, John.

1. Perry's lead mine: *Western Jour.*, vol. 1, pp. 608-613, 1848.

Phillips, E. R. Refer to Siebenthal, C. E.

Phillips, Hiram.

1. Building and paving stones of Missouri: *Stone*, vol. 11, pp. 313-415, Chicago, Illinois, 1895.

Phillips, John van Cleve.

1. Report on geology of mining district contiguous to Iron Mountain Railroad: Pamphlet, 14 pp., map and section, St. Louis, Missouri, 1859.
2. Geology of the west: *Western Rev. Sci.*, vol. 1, pp. 488-491, 1877.

Pike, Ruthven Wedgewood.

1. The geology of a portion of the Crystal City quadrangle, Missouri: *Chicago Univ. Abstracts of Theses, Science ser.*, vol. 6, pp. 197-201, 1929.

Pike, Zebulon Montgomery.

1. Account of expedition to sources of the Mississippi and through western parts of Louisiana, to sources of the Arkansas, Kansas, LaPlatte and Pierre Juan Rivers, performed by order of the government of the United States during the years 1805, 1806, and 1807; and tour through interior parts of New Spain, when conducted through these provinces by order of the captain-general, in the year 1807. One volume, 496 pp., Philadelphia, Pennsylvania, 1810.
2. Exploratory travels through western territories of North America; comprising a voyage from St. Louis, on the Mississippi to the source of that river, and a journey through the interior of Louisiana, and northeastern provinces of New Spain, performed in the years 1805, 1806 and 1807, by order of the government of the United States. One volume, 436 pp., London, 1811.

Pirsson, Louis Valentine.

1. (and Wells, H. L.). On the occurrence of leadhillite in Missouri and its chemical composition: *Am. Jour. Sci.*, 3d ser., vo. 48, pp. 219-226, 1894.

Place, P. B.

1. Kansas and Missouri coals—their classification and analysis: *Combustion*, vol. 8, pp. 37-40, April, 1937.

Plumb, Carlton, H.

1. The tripoli industry: *Eng. and Min. Journal*, vol. 96, pp. 1285-1287, 1914.

Pond, W. F. Refer also to Greene, F. C.

1. Mineral production of Missouri: *Missouri Bur. Geol. and Mines*, 53d Bienn. Rept. State Geologist, 1923-24, pp. 23-80, 1925.

Porter, D.

1. Report of water-power of region tributary to Mississippi River on the west, below Dubuque, Iowa (This contains much relating to the Missouri streams.): U. S. Tenth Census, vol. 17, pp. 277-428, Washington, 1885.

Posepny, Franz.

1. Genesis of ore deposits: Am. Inst. Min. Eng. Trans., vol. 23, pp. 197-369, 1894.

Postley, Olive Clara.

1. Bibliography of geologic structure maps and cross sections of areas in oil and gas states east of the Mississippi River and some producing states in the Mid-Continent region: Am. Assoc. Petroleum Geologists Bull., vol. 22, pp. 431-482, 1938.

Poston, Roy H.

1. Prospect drilling in southeast Missouri: Eng. and Min. Jour., vol. 125, no. 1, pp. 14-16, January, 1928.
2. Method and cost of mining at No. 8 Mine, St. Louis Smelting and Refining Company, Southeast Missouri District: U. S. Bureau of Mines Inf. Circ. 6160, 22 pp., 15 figs., 1929.
3. Sinking practice and costs at the Pim Shaft, St. Louis Smelting and Refining Works, National Lead Company, St. Francois Co., Missouri: U. S. Bureau of Mines Inf. Circ. 6588, 13 pp., 7 figs., 1932.

Potter, Charles Jackson.

1. A study of the iodine content of Missouri vegetables and soils: Univ. of Missouri, School of Mines and Met., unpublished thesis, 54 pages, folded map, Rolla, Missouri, 1930.

Potter, Paul C.

1. Missouri, Forest City Basin area: Nat. Oil Scouts and Landmen's Assoc. Year Book 1939, vol. 10, pp. 286-288, 1940.
2. Missouri, Forest City Basin, summary of activities: Nat. Oil Scouts and Landmen's Assoc. Year Book 1940, vol. 11, pp. 301-302, 1941.
3. Missouri, Forest City Basin, summary of activities: Nat. Oil Scouts and Landmen's Assoc. Year Book 1941, vol. 12, p. 368-371 (mimeographed), 2 figs., incl. geol. map, 1942.

Potter, William Bleecker.

1. Geology of Lincoln County: Rept. on Iron Ores and Coal Fields, Field Work of 1872, pt. 2, pp. 215-289, 2 maps, separate, New York, 1873.
2. Local coal deposits in Missouri: Editorial based on Geology of Lincoln County: Eng. and Min. Jour., vol. 17, pp. 289, 305, 1884.
3. The iron ore regions of Missouri: Charcoal Iron Worker's Jour., vol. 6, p. 23, 1885.

Pough, Frederick Harvey.

1. The Rueppele iron mine (Franklin Co.): Washington University, unpublished thesis, 57 pp., 16 figs., 3 pl., St. Louis, Missouri, 1932.
2. Mineralogy of the Missouri hematite sinks (abstract): *Am. Mineralogist*, vol. 27, no. 3, p. 230, March, 1942.

Powers, Sidney.

1. Structural geology of the Mid-Continent region: *Geol. Soc. America Bull.*, vol. 36, pp. 379-392, 1925.
2. Review of paper by Dake and Bridge, on initial dips peripheral to resurrected hills: *Am. Assoc. Petroleum Geologists Bull.*, vol. 12, pt. 2, 1171-1172, December, 1928.

Pratt, J. H.

1. Briquetting tests of Missouri coal: *U. S. Geol. Survey Bull.* 261, pp. 147, 160, 168, 1905.
2. Briquetting tests of Missouri coal: *U. S. Geol. Survey Prof. Paper* 48, pt. 3, p. 1445, 1906.

Pratten, H. Refer also to Norwood, J. G.

1. Notice of *Producti* found in western states and territories, with descriptions of twelve new species: *Philadelphia Acad. Nat. Sci. Jour.*, 2d ser., vol. 3, pp. 9-23, 2 pls., 1854.

Preston, H. L.

1. Two new American meteorites (one from central Missouri): *Am. Jour. Sci.*, 4th ser., vol. 9, pp. 283-296, 1900.

Price, E. E. Refer to Price, J. M.

Price, J. M.

1. (and Price, E. E.). Notes on Phelps County ores: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1904.

Prime, Frederick, Jr.

1. Coals of United States: *U. S. Tenth Census*, vol. 15, pp. 603-607, Missouri coal fields, Washington, 1885.

Prince, John.

1. Technical problems of the sand and gravel industry: *Mineral Indus. Conf. Proc.*, Rolla, Missouri, 1938, pp. 63-65, Rolla, Missouri, 1940.

Prout, Hiram Augustus.

1. The geology and mineral resources of the State of Missouri: *Western Jour. and Civilian*, vol. 1, p. 6, St. Louis, Missouri, 1848.
2. On the geology of the valley of the Mississippi: *Western Jour. and Civilian*, vol. 1, pp. 243-252, 1848.
3. On the economical geology of the State of Missouri: *Western Jour. and Civilian*, vol. 1, pp. 429-439, 1848.

4. The advantages of a geological survey of the State of Missouri: Published privately, 29 pp., St. Louis, 1850.
5. Belcher's artesian well in St. Louis (contains log of well): Am. Jour. Sci., 2d ser., vol. 15, pp. 460-463, 1853.
6. Description of a new species of *Productus* from the Carboniferous limestone of St. Louis, Missouri: St. Louis Acad. Sci. Trans., vol. 1, pp. 43-45, il., 1857.
7. First of a series of descriptions of Carboniferous Bryozoa: St. Louis Acad. Sci. Trans., vol. 1, pp. 235-237, 1858.
8. Second series of descriptions of Bryozoa from the Paleozoic rocks of the western states and territories: St. Louis Acad. Sci. Trans., vol. 1, pp. 266-273, 1858.
9. Third series of descriptions of Bryozoa from the Paleozoic rocks of the western states and territories: St. Louis Acad. Sci. Trans., vol. 1, pp. 443-452, il., 1859.
10. Fourth series of descriptions of Bryozoa from the Paleozoic rocks of the western states and territories. St. Louis Acad. Sci. Trans., vol. 1, pp. 571-581, 1860.
11. Description of new varieties of Bryozoa: St. Louis Acad. Sci. Trans., vol. 2, no. 3, pp. 410-413, 1866.

Pulsifer, H. B.

1. Lead smelting at Herculaneum, Missouri: Min. and Eng. World, vol. 39, no. 24, pp. 1054-1061, December 13, 1913.
2. Development of lead smelting in Missouri: Min. and Eng. World, vol. 40, no. 25, pp. 1148-1153, June 20, 1914.

Pulsifer, William H.

1. Notes for a history of lead and an inquiry into the development of the manufacture of white lead and lead oxides: 389 pp., Compiled by William H. Pulsifer, St. Louis. Published by D. Van Nostrand, New York, 1888.

Pumpelly, Raphael.

1. Preliminary report on the iron ores and coal fields (of Missouri) from the field work of 1872: Missouri Geol. Survey, 441 pp., 190 figs., New York, 1873.
2. Notes on geology of Pilot Knob and its vicinity: Missouri Geol. Survey Preliminary report on the iron ores and coal fields from the field work of 1872, pt. 1, pp. 3-28, New York, 1873.
3. The iron ores of Missouri: Eng. and Min. Jour., vol. 22, p. 1, 1876.
4. (and Chauvenet, Regis, and Blair, A. A.). Iron ores of Missouri and Michigan: One volume, 320 pp., New York, 1876.
5. Relation of secular rock disintegration to loess, glacial drift and rock basins: Am. Jour. Sci., 3d ser., vol. 17, pp. 133-145, 1879.
6. Report on mining industries of United States, geographical and geological distribution of iron ores of United States (has map, sections and descriptions of the Missouri iron ores): U. S. Tenth Census, vol. 15, pp. 3-36, Washington, 1886.
7. Relation of secular rock-disintegration to certain transitional crystalline schists (Special reference is made to Pilot Knob and Iron Mountain.): Bull. Geol. Soc. America, vol. 2, pp. 209-224, 1891.
8. Correlation of clastic rocks; pre-Cambrian: Int. Geol. Cong., V, Washington, 1891, Compte Rendu, pp. 173-174, 1893.

Purdue, Albert Homer.

1. The Charleston (Missouri) earthquake: *Indiana Acad. Sci. Proc.*, 1895, pp. 51-53, 1896.
- 1A. Description of the Winslow Quadrangle, Arkansas, Indian Territory: *U. S. Geol. Survey Atlas*, Winslow fol. no. 154, 6 pp., 2 maps, 1907.
2. (and Miser, H. D.). Description of the Eureka Springs and Harrisonville quadrangles, Arkansas, Missouri: *U. S. Geol. Survey Atlas*, Eureka Springs-Harrison fol. no. 202, 22 pp., maps, 1916.

Quigley, C. M., Jr.

1. Conodonts from the Sylamore sandstone of southwestern Missouri and northwestern Arkansas: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1942.

Quinby, George E.

1. Fourteenth annual report of the lead and zinc mine inspector of the State of Missouri for the year ending June 30, 1900, 211 pp., Jefferson City, Missouri, 1901.
2. Seventeenth annual report of the state lead and zinc mine inspectors of the State of Missouri eastern and western districts, for the year ending December 31, 1903, 306 pp., 18 pls., 1 chart, Jefferson City, Missouri, 1904.

Radcliffe, D. H.

1. The preservation and interpretation of ripple marks and sun cracks: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, Rolla, Missouri, 1913.

Radebaugh, John Wesley.

1. Glacial geology of Saint Louis City and County: *Washington Univ.*, 59 pp., front., il., 22 figs., St. Louis, Missouri, 1929.

Ramirez, John Emilio.

1. The earthquakes of August 29 and September 1, 1930, in the New Madrid region: *Seismol. Soc. America Bull.*, vol. 21, no. 2, pp. 159-169, 2 figs., June, 1931.
2. An experimental investigation of the nature and origin of microseisms at St. Louis, Missouri: *Seismol. Soc. America Bull.*, vol. 30, pp. 35-84, 139-178, 1940.

Randall, D. C.

1. The fauna of the Auburn chert: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1934.

Rasor, Charles Alfred.

1. Bravoite from a new locality (in Missouri): *Econ. Geology*, vol. 38, no. 5, pp. 399-407, 7 figs., August, 1943.

Rath, Gerhard vom.

1. Observation on Iron Mountain, Missouri: *Niederrheinische Gesellschaft für Natur und Heilkunde*, vol. 41, pp. 126-134, 1884.

Ray, Louis Lamy. Refer to Hinchey, N. S.

Raymond, Percy Edward.

1. Note on the zinc deposits of southern Missouri: *Am. Inst. Min. Eng. Trans.*, vol. 8, pp. 165-167, 1880; *Eng. and Min. Jour.*, vol. 28, pp. 240-241, 1879.

Raymond, Rossiter Worthington.

1. American lead mines: *Eng. and Min. Jour.*, vol. 10, p. 105, 1871.
2. Missouri tin: *Eng. and Min. Jour.*, vol. 13, p. 137, 1872.
3. Peculiar iron ore deposits in Missouri: *Eng. and Min. Jour.*, vol. 17, p. 209, 1874.
4. Notice of Pumpelly's Geological survey of Missouri: *Eng. and Min. Jour.*, vol. 17, pp. 136-137, 153-154, 1874.
5. Missouri iron ores: *Eng. and Min. Jour.*, vol. 18, p. 324, 1874.
6. Missouri zinc ores: *Eng. and Min. Jour.*, vol. 28, p. 123, 1879.
7. Note on the zinc deposits of southern Missouri: *Eng. and Min. Jour.*, vol. 28, pp. 240-241, 1879; *Am. Inst. Min. Eng. Trans.*, vol. 8, p. 165, 1879.

Read, O. H. Refer to Bradley, R. S.

Reed, Eugene Clifton. Refer to Carmody, R. A., and Condra, G. E.

Reeside, John B., Jr.

1. Stratigraphic nomenclature in the United States: *International Geol. Congress*, 16th Sess., Guidebook 29, pp. 1-6, 1933.

Reger, James Smythe.

1. Some effects of geology on the relation between rainfall and run-off: *Univ. of Missouri, School of Mines and Met.*, unpublished thesis, 80 pp., fold. maps., Rolla, Missouri, 1939.

Reinoehl, C. O. Refer to Farnham, F. C., and Grohskopf, J. G.

Reister, J. T.

1. The Missouri gold discovery: *Mines, Metals and Arts*, vol. 4, p. 42, October 7, 1875; p. 54, October 14; p. 65, October 21, 1875, St. Louis, Missouri.

Renaud, Etienne Bernardeau.

1. Yuma and Folsom artifacts: *Colorado Mus. Nat. Hist. Proc.*, vol. 11, no. 2, pp. 5-18, 4 pls., November 19, 1932.

Reynolds, Ben D.

1. Technical problems of the tripoli, chat, and ground limestone industries: *Mineral Industries Conf. Proc.*, Rolla, Missouri, 1938, pp. 68-70, Rolla, Missouri, 1940.

Rhodes, Mary Louise.

1. Physical geology of an area near Humansville, Missouri (abstract): *Missouri Acad. Sci. Proc.*, vol. 5, no. 4, p. 130, 1940; *Univ. of Missouri*, thesis, Columbia, Missouri, 1939.

Rice, Claude T.

1. Milling in southeastern Missouri: *Eng. and Min. Jour.*, vol. 95, no. 25, pp. 1229-32, June 21, 1913; vol. 95, no. 26, pp. 1283-88, June 28, 1913; vol. 96, no. 1, pp. 7-14, July 5, 1913; vol. 96, no. 2, pp. 57-64, July 12, 1913.

Richards, M. E.

1. Technical problems of the iron ore industry of Missouri: *Mineral Industries Conf. Proc.*, Rolla, Missouri, 1938, pp. 77-78, Rolla, Missouri, 1940.

Richardson, John.

1. Mastodon (?) and *Elephas primigenius*: *Am. Jour. Sci.*, 2d ser., vol. 19, pp. 131-132, 1855.

Ridge, John.

1. The genesis of the Tri-State zinc and lead ores: *Econ. Geology*, vol. 31, pp. 298-313, 1936.

Ries, Heinrich.

1. The clay working industry in 1896: *U. S. Geol. Survey 18th Ann. Rept.*, pt. 5, pp. 1105-1168, 1897.
2. (and Bayley, W. S., and others.). High-grade clays of the eastern United States, with notes on some western clays: *U. S. Geol. Survey Bull.* 708, pp. 104-108, 135-147, 1922.

Risk, T. E. Refer also to Tarver, Mark.

1. Geological survey of Missouri: *Western Jour.*, vol. 2, pp. 333-337, 1843.

Roberts, John E.

1. Thirty-fourth annual report of the Bureau of Mines, Mining and Mine Inspection of the State of Missouri, for the year ending December 31, 1921, 51 pp., Jefferson City, Missouri, 1922.
2. Thirty-fifth annual report of the Bureau of Mines, Mining and Mine Inspection of the State of Missouri, for the year ending December 31, 1922, Jefferson City, Missouri, 1923.
3. Thirty-sixth annual report of the Bureau of Mines, Mining and Mine Inspection of the State of Missouri for the year ending December 31, 1923, 50 pp., Jefferson City, Missouri, 1924.
4. Thirty-seventh annual report of the Bureau of Mines, Mining and Mine Inspection of the State of Missouri for the year ending December 31, 1924, 56 pp., Jefferson City, Missouri, 1925.

Roberts, R. W. Refer to Williams, W. S.

Robertson, Florence.

1. Two recent earthquakes in the New Madrid region: *Seismol. Soc. America Bull.*, vol. 27, no. 3, pp. 231-239, 2 figs., index maps, July, 1937.
2. Evidence from deep-focus earthquakes for the crustal structure of Missouri: *Seismol. Soc. America Bull.*, vol. 27, no. 3, pp. 241-244, 1 fig., July, 1937.

3. The Missouri-Tennessee earthquake of January 30, 1937 (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, p. 131, September 15, 1937.
4. The bearing of the deep earthquakes of November 19, 1936, on the crustal structure of Missouri (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, p. 132, September 15, 1937.

Robertson, Forbes. Refer also to Robertson, P.

1. The igneous geology of the eastern Ironton and western Fredericktown quadrangles, Missouri: Washington Univ., unpublished thesis, 137 pp., 61 figs., St. Louis, Missouri, 1940.
2. Flow sequence in the felsite rocks in the eastern Ironton quadrangle (abstract): Missouri Acad. Sci. Proc., vol. 6, no. 4, pp. 83-84, 1940.

Robertson, James D.

1. Notes on the formation of the iron ores: Science, vol. 21, p. 131, 1893.
2. Methods of analysis pursued in determination of minute quantities of metals (lead and zinc) in crystalline and clastic rocks: Missouri Geol. Survey, 1st ser., vol. 7, pp. 740-742, Jefferson City, Missouri, 1894.
3. Missouri lead and zinc deposits: Am. Geologist, vol. 15, pp. 235-248, 1895.
4. List of references (to lead and zinc): Missouri Geol. Survey, 1st ser., vol. 7, pp. 743-753, Jefferson City, Missouri, 1894.

Robertson, Percival.

1. An occurrence of gypsum rosettes in a cave in Jefferson County, Missouri (abstract): Missouri Acad. Sci. Proc. vol. 1, p. 123, 1935.
2. The loess in the vicinity of St. Louis (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, p. 129, 1937.
3. Drift exposures in St. Louis and St. Louis County (abstract): Missouri Acad. Sci. Proc., vol. 3, no. 4, p. 128, 1937.
4. Some problems of the middle Mississippi River region during Pleistocene time: St. Louis Acad. Sci. Trans., vol. 29, no. 6, pp. 70-240, 21 figs., July, 1938.
5. (and De Windt, Edward A.). An unusual mineral (Aerinite) in north St. Louis County (abstract): Missouri Acad. Sci. Proc., vol. 4, no. 6, pp. 160-161, March, 1939.
6. Some Pleistocene terraces of the Mississippi River (abstract): Geol. Soc. America Bull., vol. 51, no. 12, pt. 2, p. 2041, December, 1940.
7. (and Brooks, M.). Additional notes on the geodes of the Warsaw formation: Illinois Acad. Sci. Trans., vol. 33, no. 2, pp. 168-171, December, 1940; The Mineralogist, vol. 9, no. 7, pp. 251-252, 269-270, July, 1941.
8. (and Robertson, F.). Implication of a cobble of bauxite found in the "Lafayette" gravel of St. Louis County (abstract): Missouri Acad. Sci. Proc., vol. 6, no. 4, pp. 80-81, 1941.

Robinson, Samuel.

1. A catalogue of American minerals, with their localities, including all which are known to exist in the United States and British Provinces, etc. (This has 10 pages relating to Missouri minerals and localities.): Boston, Massachusetts, 1825.

Robitshek, Melvin F.

1. The surface approach to the subsurface study of the Spergen formation in eastern Missouri: Washington Univ., unpublished thesis, 128 pp., 25 figs., 19 pl., maps in pockets, St. Louis, Missouri, 1941.
2. Stratigraphy of the Spergen formation (abstract): Missouri Acad. Sci. Proc. 1941, vol. 7, no. 4, pp. 108-109, January 25, 1942.

Rodgers, H. D.

1. Geology of United States (Recognizes Trenton limestone in Ozark region.): Geology Pennsylvania, vol. 2, p. 752, 1858.

Roemer, F.

1. Über den Bau von *Melonites multipora*, ein echinid des amerikanischen Kohlenhalks (The specimen figured is from St. Louis.): Archiv für Naturgeschichte, ein und zwanzigster Jahrgang, erster Band, (vol. 21, pt. 1), pp. 312-330, 1855.

Roessler, A. W.

1. Examination of Missouri tin: Eng. and Min. Jour., vol. 5, p. 313, 1868.
2. Missouri lead and coal; Note about the Simpson mines in Moniteau County: Eng. and Min. Jour., vol. 7, p. 276, 1869.
3. The ores of the west: Eng. and Min. Jour., vol. 8, p. 407, 1870.
4. Report of the geologist of the General Land Office: Eng. and Min. Jour., vol. 11, pp. 59-60, 1872.

Rogers, Austin Flint. Refer also to Beede, J. W.

1. Normal ankerite from Phelps Co., Missouri: Kansas Univ. Quart., vol. 8, p. 183, 1899.
2. New bryozoans from the Coal Measures of Kansas and Missouri: Kansas Univ. Quart., vol. 9, pp. 1-12, figs., 1900.
3. Annotated list of the minerals occurring in the Joplin lead and zinc district: Kansas Univ. Quart., vol. 9, pp. 161-165, 1900.
4. Occurrence of the bryozoan genus *Rhabdomeson* in America: Kansas Univ. Quart., vol. 9, pp. 173-174, figs., 1-3, 1900.
5. Some new species of *Cyclus* from the Coal Measures (Describes species from Pennsylvanian of Missouri.): Kansas Univ. Sci. Bull., vol. 1, pp. 42-48, 1 pl., 1902.
6. The minerals of the Joplin, Missouri, lead and zinc region (abstract): Science, new ser., vol. 15, pp. 867-868, 1902; New York Acad. Sci. Annals., vol. 15, pp. 60-61, 1903.
7. Minerals of the Galena-Joplin lead and zinc district: Kansas Univ. Geol. Survey, vol. 8, pp. 445-509, 1904.

Rogers, Henry Darwin.

1. Sketch of the geology of the United States: Geology of Pennsylvania, vol. 2, pp. 741-775, 1858.

Rominger, C.

1. Observations on *Chaetetes* and some related genera in regard to their systematic position; with an appended description of some new species (Missouri species are described.): Philadelphia Acad. Sci. Proc., 1866, pp. 113-124, 1866.

Ross, Beauregard.

1. The metallurgic treatment of the iron ores of southwest Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1882.
2. Hahatonka (description of cave, spring and geology of region): Bull. Bradley Geol. Field Sta., Drury Coll., vol. 1, pt. 2, pp. 68-71, Springfield, Missouri, 1905.

Ross, Clarence Samuel.

1. The "chloritic" minerals in the ores of southeastern Missouri (abstract): Econ. Geology, vol. 11, pp. 289-290, 594, 1916; Illinois Acad. Sci. Trans., vol. 9, p. 209, 1917.
2. (and Henderson, E. P.). Topaz and associated minerals from the Einstein silver mine, Madison County, Missouri: Am. Mineralogist, vol. 10, no. 12, pp. 441-443, December, 1925.

Rothwell, R. P.

1. The lead and zinc ores of southwest Missouri: Eng. and Min. Jour., vol. 43, pp. 397-398, 1887.

Round, Eda M.

1. Correlation of coal floras in Henry County, Missouri, and the Naragansett Basin: Bot. Gazette, vol. 83, no. 1, pp. 61-69, 3 figs., March, 1927.

Rowley, Robert Roswell.

1. The Chouteau group of eastern Missouri: Am. Geologist, vol. 3, pp. 111-116, 1889.
2. Observations on three Kinderhook fossils: Am. Geologist, vol. 3, pp. 275-276, 1889.
3. *Batocrinus calvinia*, a new species of Burlington crinoid: Am. Geologist, vol. 5, pp. 146-147, il., 1890.
4. Some observations on natural casts of crinoids and blastoids from the Burlington limestone: Am. Geologist, vol. 6, pp. 66-67, 1890.
5. The Keokuk limestone and Coal Measures of Pike County, Missouri: Kansas City Scientist, vol. 5, pp. 26-27, 1891.
6. The Trenton limestones and Hudson River shales (Pike Co., Missouri): Kansas City Scientist, vol. 5, pp. 57-59, 1891.
7. Fossil collecting in the Burlington limestone (Pike Co., Missouri): Kansas City Scientist, vol. 5, pp. 71-72, 1891.
8. (and Hare, S. J.). Description of some new species of Echinodermata from the sub-Carboniferous rocks of Pike Co., Missouri: Kansas City Scientist, vol. 5, pp. 97-103, il., 1891.
9. (and Hare, S. J.). Description of some new species of crinoids and blastoids from the sub-Carboniferous rocks of Pike and Marion Cos., Missouri, and Scott Co., Virginia: Kansas City Scientist, vol. 5, pp. 113-118, il., 1891.

10. Range of Chouteau fossils (Missouri): *Am. Geologist* vol. 12, pp. 49-50, 1893.
11. The Hamilton beds of Callaway Co., Missouri: *Am. Geologist*, vol. 12, pp. 203-205, 1893.
12. Description of some new species of crinoids, blastoids, and brachiopods from the Devonian and sub-Carboniferous rocks of Missouri: *Am. Geologist*, vol. 12, pp. 303-309, il., 1893.
13. New species of crinoids and brachiopods from the Missouri Hamilton: *Am. Geologist*, vol. 12, pp. 151-154, il., 1894.
14. Description of a new genus and five new species of fossils from the Devonian and sub-Carboniferous rocks of Missouri: *Am. Geologist*, vol. 16, pp. 217-223, il., 1895.
15. (and Keyes, C. R.). Vertical range of fossils at Louisiana, (Missouri): *Iowa Acad. Sci. Proc.*, vol. 4, pp. 26-40, 1897.
16. New species of crinoids, blastoids, and cystoids from Missouri: *Am. Geologist*, vol. 25, pp. 65-75, il., 1900.
17. Description of new species of fossils from the Devonian and sub-Carboniferous rocks of Missouri: *Am. Geologist*, vol. 25, pp. 261-273, il., 1900.
18. Notes on the fauna of the Burlington limestone at Louisiana, Missouri: *Am. Geologist*, vol. 26, pp. 245-251, 1900.
19. Two new genera and some new species of fossils from the upper Paleozoic rocks of Missouri: *Am. Geologist*, vol. 27, pp. 343-355, il., 1901.
20. New species of fossils from the sub-Carboniferous rocks of north-eastern Missouri: *Am. Geologist*, vol. 29, pp. 303-310, il., 1902.
21. The Echinodermata of the Missouri Silurian and a new brachiopod: *Am. Geologist*, vol. 34, pp. 269-282, il., 1904.
22. Missouri paleontology: *Am. Geologist*, vol. 35, pp. 301-311, il., 1905.
23. (Descriptions of fossils) in Greene, G. K., *Contribution to Indiana paleontology*: vol. 2, pts. 1 and 2, 1906.
24. The geology of Pike Co.: *Missouri Bur. Geol. and Mines*, 2d ser., vol. 8, 122 pp., map, 1908.
25. The Edgewood limestone of Pike Co., Missouri: *Am. Jour. Sci.*, 4th ser., vol. 41, pp. 317-320, 1916.
26. (and Williams, James Steele). Unique coloration of two Mississippian brachiopods: *Washington Acad. Sci. Jour.*, vol. 23, no. 1, pp. 46-58, 4 figs., January 15, 1933.

Rozier, Firmin A.

1. Submerged lands of the State of Missouri: *Western Jour.*, vol. 3, pp. 391-396, 1832.

Rubey, William Walden.

1. The effect of gravitational compaction on the structure of sedimentary rocks; a discussion: *Am. Assoc. Petroleum Geologists Bull.*, vol. 11, no. 6, pp. 621-632, June, 1927.
2. Structural history of Cap au Gres faulted flexure (abstracts): *Pan-Am. Geologist*, vol. 53, no. 1, p. 76, February, 1930; *Geol. Soc. America Bull.*, vol. 41, no. 1, pp. 52-53, March 31, 1930.
3. Geology of Calhoun Co., Illinois (Includes several references to Missouri.): *Illinois Geol. Survey*, in preparation.

Ruhl, Otto.

1. The King-Ritter fault (Springfield area, Missouri): Bull. Bradley Geol. Field Sta., Drury Coll., vol. 1, pp. 33-36, Springfield, Missouri, 1904.
2. Observations at Pegmatite Hill (Camden Co., Missouri): Bull. Bradley Geol. Field Sta., Drury Coll., vol. 1, pp. 36-40, Springfield, Missouri, 1904.
3. The calamine deposits of southwest Missouri: Mining World, vol. 28, pp. 787-788, 1908.
4. Unconformity and deposits (lead and zinc deposits in Missouri-Kansas district): Mining Scientific Press, vol. 96, pp. 778-780, San Francisco, California, 1908.
5. Miami lead and zinc district in Oklahoma: Eng. and Min. Jour., vol. 86, pp. 910-912, 1908.
6. History of southeast Missouri lead district: Mining World, vol. 30, pp. 721-724, Chicago, Illinois, 1909.

Ruppel, G. E. Refer to Goesse, John B.

Russell, Richard Dana.

1. Mineral composition of Mississippi River sands: Geol. Soc. America Bull., vol. 48, pp. 1307-1348, September, 1937.

Russell, Richard Joel.

1. Lower Mississippi Valley loess: Geol. Soc. America Bull., vol. 55, pp. 1-40, 1944.

Rust, George W.

1. Colloidal primary copper ores at Cornwall mines, southeastern Missouri: Jour. Geology, vol. 43, no. 4, pp. 398-426, 9 figs., incl. index map, May-June, 1935.
2. Preliminary notes on explosive volcanism in southeastern Missouri: Jour. Geology, vol. 45, no. 1, pp. 48-75, 15 figs., incl. index and geol. sketch maps, January-February, 1937; abstracts, Pan-Am. Geologist, vol. 65, no. 2, p. 158, March, 1936; Geol. Soc. America Proc. 1935, p. 441, June, 1936.

Rutledge, J. J.

1. Coal mining methods in Randolph County, Missouri: Eng. and Min. Jour., vol. 86, no. 1, pp. 6-8, July 4, 1908.

Rutledge, Richard Boyden.

1. The geology of Lawrence County and parts of Newton and Barry Counties, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1924.

Ryan, William Alexander, Jr.

1. The conodonts from the Jefferson City formation of Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

St. Clair, Stuart. Refer to Weller, S.

St. John, O.

1. (and Worthen, A. H.). Descriptions of fossil fishes (Missouri species are described.): Illinois vol. Survey, vol. 6, pp. 243-481, 33 pls., Springfield, Illinois, 1875.
2. (and Worthen, A. H.). Descriptions of fossil fishes (Numerous species are described from Missouri.): Illinois Geol. Survey, vol. 7, pp. 53-364, pls. 1-26, Springfield, Illinois, 1883.

Sales, Reno.

1. The ore deposits of the Tri-State district (a discussion): Econ. Geology, vol. 28, pp. 780-786, December, 1933.

Salisbury, Rollin D. Refer also to Chamberlin, T. S.

1. Relationship of Pleistocene to pre-Pleistocene formations of Crowley's Ridge and adjacent areas south of limit of glaciation: (incidental references to Missouri geology): Arkansas Geol. Survey Ann. Rept. 1889, vol. 2, pp. 224-248, Little Rock, Arkansas, 1891.

Sampson, Francis Asbury.

1. Natural history (of Pettis Co., Missouri), including its geological formations, its paleontology...: The history of Pettis County, Missouri, pp 221-239, 1882.
2. Notes on the sub-Carboniferous series at Sedalia, Missouri: New York Acad. Sci. Trans., vol. 7, pp. 246-247, 1888.
3. A bibliography of the geology of Missouri: Missouri Geol. Survey Bull. 2, 158 and xviii pp., 1890.
4. Missouri official geological reports: Science, vol. 21, pp. 311- 312, 1893.
5. The New Madrid and other earthquakes of Missouri: Seismol. Soc. America Bull., vol. 3, pp. 57-71, 1913.
- 5A. A preliminary list of the Mollusca of Missouri (exclusive of the Unionidae): Acad. Sci. St. Louis Trans., vol. 22, pp. 67-108, 1913.
6. Post-Pliocene shells of Providence and Lupus, Missouri: Nautilus, vol. 28, pp. 15-17, 1914.

Sanborn, J. W.

1. Resources of Missouri: 17th Rept. Missouri State Board of Agri., pp. 150-158, 1883.

Sanford, Samuel. Refer also to Schrader, F. C.

1. (and Stone, Ralph W.). Useful minerals of the United States: U. S. Geol. Survey Bull. 585, pp. 104-108, 1914.

Sanson, F. W.

1. Milling practice at the Netta Mine of the Eagle Picher Lead Company, at Picher, Oklahoma: U. S. Bureau of Mines Inf. Cir. 6342, 1930.

Sardeson, Frederick William.

1. Nomenclature of the Galena and Maquoketa series: Am. Geologist, vol. 19, pp. 330-336, 1897.

2. Peter sandstone and its buttes: *Pan-Am. Geologist*, vol. 45, no. 3, pp. 211-224, April, 1926.

Sauer, Carl Ortwin.

1. The geography of the Ozark Highland of Missouri: *Geog. Soc. Chicago Bull.*, vol. 7, 245 pp., 44 figs., 26 pls., January, 1920.

Savage, Thomas Edmund.

1. Ordovician and Silurian formations in Alexander Co., Illinois: *Am. Jour. Sci.*, 4th ser., vol. 28, pp. 517-518, 1909.
- 1A. The fauna of the Girardeau limestone and of the Edgewood formation (abstract): *Science*, new ser., vol. 32, p. 224, 1910.
2. The Grand Tower (Onondaga) formation of Illinois, and its relation to the Jeffersonville beds of Indiana: *Illinois Acad. Sci. Trans.*, vol. 3, pp. 116-132, 1910.
- 2A. The geology and coal resources of the Herrin quadrangle: *Illinois Geol. Survey Bull.* 16, pp. 265-285, 1910.
3. Alexandrian series in Missouri and Illinois: *Geol. Soc. America Bull.*, vol. 24, pp. 351-376, 1913.
- 3A. Alexandrian rocks of northeastern Illinois and eastern Wisconsin: *Geol. Soc. America Bull.*, vol. 27, pp. 305-324, 1916.
4. Stratigraphy and paleontology of the Alexandrian series in Illinois and Missouri: *Illinois Geol. Survey Bull.* 23, pp. 67-160, il., 1917.
5. The relations of the Alexandrian series in Illinois and Missouri to the Silurian section of Iowa: *Am. Jour. Sci.*, 4th ser., vol. 38, pp. 28-37, 1914.
6. Tentative correlation of the Pennsylvanian strata in the eastern interior, western interior, and Appalachian regions by their marine faunas (abstract): *Geol. Soc. America Bull.*, vol. 29, p. 97, 1918.
7. The Thebes sandstone and Orchard Creek shale and their faunas in Illinois: *Illinois Acad. Sci. Trans.*, vol. 10, pp. 261-275, 2 pls., 1918.
8. The Devonian formations of Illinois: *Am. Jour. Sci.*, 4th ser., vol. 49, pp. 169-182, 3 figs., March, 1920.
9. The Devonian rocks of southwestern Illinois (abstract): *Science*, new ser., vol. 51, pp. 494-495, May 14, 1920.
10. New species of Devonian fossils from western Illinois: *Illinois Acad. Sci. Trans.*, vol. 14, pp. 197-206, 4 pls., 1922.
- 10A. (and Nebel, M. L.). Geology and mineral resources of the La Harpe and Good Hope quadrangles: *Illinois Geol. Survey Bull.* 43, pp. 22-72, 1923.
11. Comparison of the Devonian rocks of Illinois and Missouri: *Jour. Geology*, vol. 33, no. 5, pp. 550-558, July-August, 1925; (abstract), *Illinois State Acad. Sci. Trans.*, vol. 18, p. 408, 1925.
12. Oriskany rocks in Illinois: *Am. Jour. Sci.*, 5th ser., vol. 10, pp. 139-144, 2 figs., August, 1925.

Sawyer, A.

1. Origin of ravines in the prairies (Records observations on the prairies at Hillsboro, Missouri.): *St. Louis, Missouri*, 1874.

Sayre, Albert Nelson.

1. The fauna of the Drum limestone of Kansas and western Missouri: Kansas Univ. Sci. Bull., vol. 19, pt. 2, pp. 75-202, 21 pls., 1931; reprinted as Kansas Geol. Survey Bull. 17, 1931; abstract, Chicago Univ. Abstracts of Theses Sci. ser., vol. 7, pp. 239-248, 1931.

Scherer, George H.

1. Geology of the Ha Ha Tonka (since written Hahatonka) district, Camden County (Missouri): Bull. Bradley Geol. Field Sta., Drury Coll., vol. 1, pt. 2, pp. 58-67, Springfield, Missouri, 1905.

Schmidt, Adolf.

1. The iron ores of Missouri: Missouri Geol. Survey, Preliminary report on the iron ores and coal fields from the field work of 1872, pt. 1, pp. 45-214, geological map, New York, 1873.
2. (and Leonhard, Alexander). The lead and zinc regions of southwest Missouri: Missouri Geol. Survey Report, Field work of 1873-1874, pp. 381-502, Jefferson City, Missouri, 1874.
3. The lead region of central Missouri: Missouri Geol. Survey Report, Field work of 1873-1874, pp. 503-577, Jefferson City, Missouri, 1874.
4. Practical rules for developing iron ore deposits: Missouri Geol. Survey Rept., Field work of 1873-1874, pp. 578-586, Jefferson City, Missouri, 1874.
5. Metallurgical properties of Missouri iron ores: Missouri Geol. Survey Rept., Field work of 1873-1874, pp. 587-600, Jefferson City, Missouri, 1874.
6. On the forms and origin of the lead and zinc deposits of southwest Missouri: St. Louis Acad. Sci. Trans., vol. 3, pp. 246-252, 1875.
7. Die Blei und Zink Erz-Lagerstätten von Missouri: Heidelberg, 1876.
8. Ueber line Umwandlung des Hornsteins: Neues Jahrb., pp. 719-721, 1878.

Schmitz, E. J.

1. Notes on a reconnaissance from Springfield, Missouri into Arkansas: Am. Inst. Min. Eng. Trans., vol. 28, pp. 264-270, 1899.

Schoolcraft, Henry Rowe.

1. A view of the lead mines of Missouri (including some observations on the mineralogy, geology, geography, antiquities, soil, climate, population and productions of Missouri and Arkansas, and other sections of the western county): 299 pp., pls., 3 engravings. New York, 1819.
2. Journal of a tour into the interior of Missouri, Arkansas, and from Potosi, or Mine a Burton, in Missouri territory, in a southwest direction, toward the Rocky Mountains (Performed in the years 1818 and 1819.): 102 pp., map, London, 1821.
3. Geological character of the limestone of the Missouri lead mine region: Am. Jour. Sci., 1st ser., vol. 3, pp. 248-249, 1821.
4. Thirty years with the Indian Tribes: Philadelphia, Pennsylvania, 1851.

5. Scenes and adventures in the semi-alpine region of the Ozark Mountains of Missouri and Arkansas which were first traversed by De Soto, in 1541 (app., observations on the mineralogy,, geology): 256 pp., Philadelphia, Pennsylvania, Lippincott, Grambo and Co., 1853.
6. Summary narratives of an exploratory expedition to the source of the Mississippi River in 1820...: 596 pp., Philadelphia, Pennsylvania, 1855.

Schottenloher, Rudolf.

1. Das Ozarkland; Amerikanische Landschaft: Geographisches Inst. der Univ. Muchen, pp. 1-128, figs., 1-17, 3 charts, folded, Berlin and Leipzig, 1936.

Schrader, Frank C.

1. (and Stone, Ralph W., and Sanford, Samuel). Useful minerals of the United States (a revision of Bull. 585): U. S. Geol. Survey Bull. 624, pp. 174-179, 1917.

Schrenk, W. T. Refer to McQueen, H. S.

Schuchert, Charles.

1. On *Syringothyris* Winchell and its American species: New York State Geologist, An.. Rept. 8, pp. 50-56, 1889; New York State Mus. Ann. Rept. 42, pp. 396-402, 1889.
2. List of species of the American Paleozoic *Orthis*, *Spirifera*, *Spiriferina*, and *Syringothyris*: New York State Geologist, Ann. Rept. 9, pp. 38-55, 1890; New York State Mus. Ann. Rept. 43, pp. 240-257, 1890.
3. A classification of the Brachiopoda: Am. Geologist, vol. 11, pp. 141-167, 1893.
4. On the development of the shell of *Zygospira recurvirostra*: Biol. Soc. Washington Proc. 8, pp. 79-82, il., 1893.
5. (and Beecher, C. E.). Development of the brachial supports in *Dielasma* and *Zygospira*: Biol. Soc. Washington Proc. 8, pp. 71-78, il., 1893; abstract, Am. Naturalist, vol. 28, 267, pp., 1894.
6. A revised classification of the spire-bearing Brachiopoda: Am. Geologist, vol. 13, pp. 102-107, 1894.
7. Spire-bearing genera of the Paleozoic Brachiopoda: Am. Geologist, vol. 13, pp. 128-132, 1894.
8. Dry dredging in the Mississippian sea: Science, new ser., vol. 2, pp. 679-681, 1895.
9. American fossil Brachiopoda: Science, new ser., vol. 2, pp. 722-724, 1895.
10. (and Winchell, N. H.). Sponges, graptolites, and corals from the lower Silurian of Minnesota: Minnesota Geol. Survey Final Rept., vol. 3, pt. 1, pp. 55-95, il., 1895.
11. (and Winchell, N. H.). The lower Silurian Brachiopoda of Minnesota: Minnesota Geol. Survey Final Rept., vol. 3, pt. 1, pp. 55-95, il., 1895.
12. A synopsis of American fossil Brachiopoda including bibliography and synonymy: U. S. Geol. Survey Bull. 87, 464 pp., 1897.

13. (and Ulrich, E. O.). Paleozoic seas and barriers in eastern North America: New York State Mus. Bull., vol. 52, pp. 633-663, map, 1902.
14. On new Silurian Cystoidea, and a new *Camarocrinus*: Am. Geologist, vol. 32, pp. 230-240, 1903.
15. On Siluric and Devonian Cystoidea and *Camarocrinus*: Smithsonian Misc. Col., vol. 47, Quarterly issue 2, pp. 201-272, il., 1904.
16. Contributions to Devonian paleontology: Am. Jour. Sci., 4th ser., vol. 19, pp. 460-463, 1905.
17. Paleogeography of North America (abstract): Science, new ser., vol. 29, pp. 629-630, 1909; Geol. Soc. America Bull., vol. 20, pp. 427-606, 1910; (reviewed), Am. Jour. Sci., 4th ser., vol. 29, pp. 552-557, 1910; Science, new ser., vol. 31, pp. 909-912, 1910.
18. On the brachiopod genus *Syringothyris* in the Devonian of Missouri: Am. Jour. Sci., 4th ser., vol. 30, pp. 223-224, 1910.
19. Paleogeographic and geologic significance of recent Brachiopoda: Geol. Soc. America Bull., vol. 22, pp. 258-275, 1911.
20. Lower Devonian; introduction, paleogeography of the Devonian: Maryland Geol. Survey, Lower Devonian, pp. 33-41, 1913.
21. The delimitation of the geologic periods illustrated by the paleogeography of North America: Int. Geol. Cong., XII, 1913, Comptes Rendu, pp. 555-591, 1914; (advance print 1913).
22. Correlation and chronology in geology on the basis of paleogeography: Geol. Soc. America Bull., vol. 27, pp. 491-514, 1916.
23. The paleogeography of Permian time in relation to the geography of earlier and later periods: Pan-Pacific Sci. Cong., Australia, 1923, Proc., vol. 2, pp. 1079-1091, 6 figs., paleogeographic map, 1924.
- 23A. Ozarkian and Canadian brachiopods; Review of papers by Ulrich, E. O. and Cooper, G. A.: Am. Jour. Sci., vol. 237, pp. 135-138, 1939.
24. Stratigraphy of the eastern and central United States, 1003 pp., 4 pls., 123 figs., 78 charts, New York, John Wiley and Sons, Inc., 1943.

Schuett, Edward. Refer to Bartle, Glenn, G.

Schultz, Gerard.

1. The development of transportation in the Ozarks (abstract): Missouri Acad. Sci. Proc., vol. 4, no. 6, pp. 174-175, March, 1939.

Schultz, J. E.

1. (and Branham, W. G.). A study of the Roubidoux in the vicinity of Rolla, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1910.

Schweitzer, Paul. Refer also to Marx, C. W.

1. Contributions from laboratory of state university (Contains account of the chalybeate spring and the water supply of Columbia.): Univ. of Missouri Ann. Rept. for 1874, pp. 160-169, 1875.
2. Contributions from laboratory of state university (Contains reports on the true composition of coal and on the methods of arriving at it, with deductions and remarks on coal in general, illus-

trated by a sample of coal from the lower coal series of Missouri; and on the water supply of Columbia, Boone County, Missouri, being an exposition on the origin of the springs and subterranean water-courses of the town and neighborhood, with some analyses of cistern water.): Univ. of Missouri Ann. Rept. for 1875, pp. 155-193, 1875.

3. Mineral waters of Missouri (a full discussion and description of the mineral springs and waters): Missouri Geol. Survey, vol. 3, 356 pp., Jefferson City, Missouri, 1892.

Scofield, W. H. Refer to Ulrich, E. O.

Scott, Harold William. Refer also to Croneiss, C. G.

1. The Chouteau formation of central Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1914.

Scudder, S. H.

1. Older fossil insects west of the Mississippi (This contains a notice of a hemipterous insect from Kansas City.): Boston Soc. Nat. Hist. Proc., 1882-87, vol. 22, p. 58, 1888.
2. A classified and annotated bibliography of fossil insects: U. S. Geol. Survey Bull. 69, 101 pp., 1890.
3. Index to the known fossil insects of the world, including myriopods and arachnids: U. S. Geol. Survey Bull. 71, 744 pp., 1891.
4. Revision of the American fossil cockroaches, with descriptions of new forms: U. S. Geol. Survey Bull. 124, 176, pp., 12 pls., 1895.

Seamon, W. H.

1. The zinciferous clays of southwest Missouri and a theory as to the growth of the calamine of that section: Am. Jour. Sci., 3d ser., vol. 39, pp. 38-42, 1890; (abstract) Univ. of Missouri, School of Mines Quart., no. 11, p. 175, 1890.
2. Tallow clays (southwestern Missouri): Sci. Am. Suppl. vol. 30, p. 12287, 1890.
3. The zinc industry of Missouri: Inter-State Mining Conv. Proc., pp. 71-78, December, 1891.
4. The mineral resources of Missouri and sheet zinc roofing: Private Pub., Rolla, Missouri, 1895.

Shaler, N. S.

1. General account of fresh-water morasses of United States (area of flooded lands of the state given): U. S. Geol. Survey 10th Ann. Rept., pp. 255-339, 1890.

Sharp, N. N.

1. Firing tests on Missouri coal: Univ. of Missouri, Eng. Exp. Sta. Bull. no. 8, vol. 3, 44 pp., Columbia, Missouri, June, 1912.

Shaw, Eugene Wesley.

1. Quaternary deformation in southern Illinois and southeastern Missouri (abstract): Geol. Soc. America Bull., vol. 26, pp. 67-68, 1915.

Shepard, Charles Upham

1. (and Shepherd, F.). Reports respecting mineral deposits in the States of Missouri and Illinois: (Priv. Pub.) 12 pp., map, Boston (?), 1840.
2. Analysis of meteoric stone which fell near Little Piney (since called Arlington in Phelps Co.) Missouri, Feb. 13, 1839: *Am. Jour. Sci.*, 1st ser., vol. 39, pp. 254-255, 1840.
3. Description of Iron Mountain, Pilot Knob and the surrounding country: *Western Jour. and Civilian*, vol. 8, p. 140, 1852.
4. Notices of several American meteorites (Includes Forsyth, Taney Co., Missouri.): *Am. Jour. Sci.*, 2d ser., vol. 30, pp. 204-208, 1860.
5. Report in relation to mineral lands in the counties of Madison, Wayne, and Iron in the State of Missouri belonging to Hiram N. Tong, of Ironton, Iron County, Missouri: 15 pp., 1860.

Shepard, Edward Martin.

1. The clays of Missouri—their qualities, composition and uses: *Inter-State Mining Conv. Proc.*, pp. 95-99, December, 1891.
2. A report on Greene County: *Missouri Geol. Survey*, 1st ser., vol. 12, Sheet Report no. 5, pp. 13-245, geological map and sections, 1898; Geological map also published as separate, 1898.
3. Water resources of Missouri: *U. S. Geol. Survey Water-Supply Paper* 102, pp. 389-440, 1904.
4. Table of geological formations (Missouri and Arkansas sections): *Bull. Bradley Geol. Field Sta., Drury Coll.*, vol. 1, pt. 1, p. 41, 1904.
- 4A. Key to the geologic horizons of Greene Co.: *Bull. Bradley Geol. Field Sta., Drury Coll.*, vol. 1, pt. II, Springfield, Missouri, 1905.
5. Spring systems of the Decaturville dome, Camden County, Missouri: *U. S. Geol. Survey Water-Supply Paper* 110, pp. 113-125, 1905.
- 5A. Water resources of Missouri: *U. S. Geol. Survey Water-Supply Paper* 114, pp. 209-219, map, 1905.
6. Underground waters of Missouri their geology and utilization: *U. S. Geol. Survey Water-Supply Paper* 195, 224 pp., 6 figs., 6 pls., 1907.
7. The New Madrid earthquake: *Jour. Geology*, vol. 13, pp. 45-62, map, 1905.
8. Geology of Greene Co., Missouri, Past and present of Greene Co., pp. 59-119, Indianapolis, Indiana, 1915.
9. Early history and exploration (of Vernon County): *Missouri Bur. Geol. and Mines*, 2d ser., vol. 19, pp. 10-20, 1926.

Shepherd, Forrest. Refer also to Shepard, C. U.

1. On soils resulting from the disintegration of particular rocks, and their adaptability to particular crops: *Missouri Agri. Rept.* No. 5, for 1869; *Proc. 11th Ann. Meeting*, pp. 27-33, January, 1870.

Shideler, William Henry.

1. Fernvale correlations (abstract): *Geol. Soc. America Proc.* 1936, pp. 367-368, June, 1937.

Shimek, Bohumil.

1. The Pleistocene of the Missouri Valley: Science, new ser., vol. 31, pp. 75-76, 1910.
2. The Pleistocene of a portion of the Missouri Valley (abstract): Science, new ser., vol. 33, p. 467, 1911.
3. The loess of Crowley's Ridge, Arkansas: Iowa Acad. Sci. Proc., vol. 23, pp. 147-152, 1916.

Shimer, Hervey Woodburn.

1. (and Shrock, R. R.). Index fossils of North America, a new work based on the complete revision and reillustration of Grabau and Shimer's "North American Index fossils", ix, 837 pp., il., New York, John Wiley & Sons, Inc., 1944.

Shipton, W. D.

1. A new exposure of Mississippian strata near Saint Louis, Missouri: Washington University Studies, vol. 11, no. 1, pp. 59-63, 2 pls., July, 1923.
2. The occurrence of Nebraska drift in northern Missouri: Washington University Studies, vol. 12, no. 1, pp. 53-71, 1924.

Shrock, Robert R. Refer to Shimer, Hervey W.

Shumard, Benjamin Franklin. Refer also to Swallow, G. C.

1. (and Owen, D. D.). Descriptions of fifteen new species of Crinoidea from the sub-Carboniferous limestone of Iowa (Includes species found in Missouri.): Philadelphia Acad. Nat. Sci. Jour., 2d ser., vol. 2, pp. 57-70, figs., 1850.
2. Description of geological section on Mississippi River from St. Louis to Commerce: Missouri Geol. Survey, First and Second Ann. Repts., pt. 2, pp. 137-184, Jefferson City, Missouri, 1855.
3. Paleontology: Missouri Geol. Survey, First and Second Ann. Repts., pt. 2, pp. 185-208, Jefferson City, Missouri, 1855.
4. Description of new fossil Crinoidea from Paleozoic rocks of western and southern portions of the United States: St. Louis Acad. Sci. Trans., vol. 1, pp. 71-81, 1857.
5. Description of new species of Blastoida from Paleozoic rocks of western states, with some observations on structure of summit of genus *Pentremites*: St. Louis Acad. Sci. Trans., vol. 1, pp. 238-249, 1858.
6. Observations on geology of the county of Ste. Genevieve: St. Louis Acad. Sci. Trans., vol. 1, pp. 404-416, 1859.
- 6A. Supposed fall of meteoric iron at St. Louis, Missouri: Am. Jour. Sci., 2d ser., vol. 34, p. 443, 1862.
7. Notice of some new and imperfectly known fossils from Primordial zone, Potsdam sandstone and Calcareous sand group of Wisconsin and Missouri: St. Louis Acad. Sci. Trans., vol. 2, pp. 101-108, 1863.
8. Description of new Paleozoic fossils: St. Louis Acad. Sci. Trans., vol. 2, pp. 108-114, 1863.
9. Vertical section of Silurian strata of Cape Girardeau County: St. Louis Acad. Sci. Trans., vol. 2, p. 156, 1863.
10. On oil springs in Missouri: St. Louis Acad. Sci. Trans., vol. 2, pp. 263-264, 1866.

11. Catalogue of Paleozoic fossils of North America: St. Louis Acad. Sci. Trans., vol. 2, pp. 334-407, 1866.
12. A geological report on the mineral lands, belonging to H. H. Melton, Esq., in Benton and Hickory Counties, Missouri: 24 pp., St. Louis, 1867.
13. Reports on various counties (Geological accounts of Ozark, Wright, Laclede, Pulaski, Phelps, Crawford, Cape Girardeau, Perry, Ste. Genevieve, Jefferson and Clark Counties): Missouri Geol. Survey 1855-71, pp. 189-323, 6 maps, Jefferson City, Missouri, 1874.

Siebenthal, Claude Ellsworth.

1. Structural features of the Joplin district: Econ. Geology, vol. 1, pp. 119-128, map, 1905.
2. (and Smith, W. S. T.). Description of the Joplin district (Missouri-Kansas): U. S. Geol. Survey, Geol. Atlas, fol. 148, 20 pp., maps, 1907.
3. (and Mesler, R. D.). Tripoli deposits near Seneca, Missouri: U. S. Geol. Survey Bull. 340, pp. 429-437, 1908.
4. Lead: Mineral Resources U. S., 1907, pt. 1, pp. 645-658; 1908, pt. 1, pp. 227-243; 1909, pt. 1, pp. 181-201; 1910, pt. 1, pp. 221-259; 1911, pt. 1, pp. 315-351; 1912, pt. 1, pp. 335-372; 1913, pt. 1, pp. 709-745; 1914, pt. 1, pp. 799-827; 1915, pt. 1, pp. 187-205, 1908-16.
5. Zinc: Mineral Resources U. S., 1906, pt. 1, pp. 659-676; 1908, pt. 1, pp. 245-273; 1909, pt. 1, pp. 203-220; 1910, pt. 1, pp. 261-304; 1911, pt. 1, pp. 353-395; 1912, pt. 1, pp. 373-416; 1913, pt. 1, pp. 621-667; 1914, pt. 1, pp. 867-919, map; 1915, pt. 1, pp. 851-977, map, 1908-17.
6. (and Graton, L. C.). Silver, copper, lead, and zinc in central states: Mineral Resources U. S., 1907, pt. 1, pp. 483-549, 1908.
7. (Lead and zinc), Central and southeast Missouri: Mineral Resources U. S., 1910, pp. 658-664, 1911.
8. Origin of the zinc and lead deposits of the Joplin region, Missouri, Kansas, and Oklahoma: U. S. Geol. Survey Bull. 606, 283 pp., maps, 1915.
9. Lead and zinc resources of the United States: Mining World, vol. 44, pp. 355-357, 1916.
10. Lead and zinc resources of the United States: 2d Pan-Am. Sci. Cong. Proc. sec. 7, vol. 8, pp. 947-954, Washington, 1917.
11. Lead and zinc resources of the United States. Am. Min. Cong., 19th Ann. Sess., Rept. Proc., pp. 397-406, 1917.
12. Zinc and cadmium in 1916: Mineral Resources U. S., 1916, pt. 1, pp. 809-835, 1 pl., June 9, 1919.
13. Lead in 1916: Mineral resources U. S., 1916, pt. 1, pp. 837-854, 1 pl., June 10, 1919.
14. Zinc in 1917: Mineral Resources U. S., 1917, pt. 1, pp. 855-879, April 6, 1920.
15. Lead in 1917: Mineral Resources U. S. 1917, pt. 1, pp. 881-897, 1 pl., 1920.
16. Lead in 1918: Mineral Resources U. S., 1918, pt. 1, pp. 937-971, 1 fig., 1 pl., January 6, 1921.
17. Zinc in 1918: Mineral Resources U. S., 1918, pt. 1, pp. 1027-1074, 2 figs., 1 pl., April 29, 1921.

18. (and Stoll, A.). Lead in 1919 (general report): Mineral Resources U. S., 1919, pt. 1, pp. 313-330, 1 pl., October 6, 1921.
19. (and Stoll, A.). Zinc in 1919: Mineral Resources U. S., 1919, pt. 1, pp. 653-664, 1 pl., October 13, 1921.
20. (and Stoll, A.). Lead in 1920 (general report): Mineral Resources U. S., 1920, pt. 1, pp. 85-95, 1 fig., October 14, 1921.
21. (and Stoll, A.). Zinc in 1920: Mineral Resources U. S., 1920, pt. 1, pp. 221-237, December 19, 1921.
22. (and Stoll, A.). Zinc in 1921: Mineral Resources U. S., 1921, pt. 1, pp. 21-33, June 17, 1922.
23. (and Stoll, A.). Lead in 1921 (general report): Mineral Resources U. S., 1921, pt. 1, pp. 35-43, July 3, 1922.
24. (and Stoll, A.). Lead and zinc pigments and salts in 1921: Mineral Resources U. S., 1921, pt. 1, pp. 55-62, 1 fig., July 10, 1922.
25. (and Stoll, A.). Lead in 1922 (general report): Mineral Resources U. S., 1922, pt. 1, pp. 27-36, 1 fig., July 17, 1923.
26. (and Stoll, A.). Zinc in 1922: Mineral Resources U. S., 1922, pt. 1, pp. 37-52, 2 figs., July 18, 1923.
27. (and Stoll, A.). Lead and zinc pigments and salts in 1922: Mineral Resources U. S., 1922, pt. 1, pp. 77-85, 2 figs., July 25, 1923.
28. (and Stoll, A.). Zinc in 1923 (smelter report): Mineral Resources U. S., 1923, pt. 1, pp. 79-99, 2 figs., October 10, 1924.
29. (and Phillips, E. R.). Barytes and barium products in 1923: Mineral Resources U. S., 1923, pt. 2, pp. 79-88, 1 fig., October 16, 1924.
30. (and Stoll, A.). Lead and zinc pigments and salts in 1923: Mineral Resources U. S., 1923, pt. 1, pp. 119-128, 2 figs., November 3, 1924.
31. (and Stoll, A.). Lead in 1923 (smelter report): Mineral Resources U. S., 1923, pt. 1, pp. 129-144, 1 fig., November 4, 1924.
32. Balance sheets for mine and smelter production of domestic copper, lead, and zinc: *Econ. Geology*, vol. 20, no. 1, pp. 83-96, January-February, 1925.
33. Contour map of the surface of the beds underlying the Cherokee shale in a portion of the Picher district, Oklahoma, showing relations of ore bodies to the surface contoured: *U. S. Geol. Survey*, 4 pp. (mimeographed) and map, April 20, 1925.
34. (and Stoll, A.). Zinc in 1924 (smelter report): Mineral Resources U. S., 1924, pt. 1, pp. 235-254, 2 figs., April 13, 1926.

Simmons, Harry F.

1. Missouri-Illinois formations are studied by geologists: *Oil and Gas Jour.*, vol. 38, pp. 26-27, September 7, 1939.

Simonds, Frederick William.

1. The geology of Washington County, Arkansas: *Arkansas Geol. Survey Ann. Rept.*, 1888, vol. 4, pp. 49-53, 1891.

Singewald, Joseph T., Jr.

1. (and Milton, Charles). Origin of iron ores of Iron Mountain and Pilot Knob, Missouri: *Am. Inst. Min. Met. Eng. Tech. Pub.* 197, 12 pp., 2 figs., March, 1929; *Trans.* 1929, pp. 330-340, 2 figs., 1929.

2. (and Milton, Charles). Greisen and associated mineralization at Silvermine, Missouri: *Econ. Geology*, vol. 24, no. 6, pp. 569-591, 12 figs., September-October, 1929; abstract, *Washington Acad. Sci. Jour.*, vol. 19, no. 13, p. 291, July 19, 1929.
3. (and Milton, Charles). An alnöite pipe, its contact phenomena, and ore deposition near Avon, Missouri: *Jour. Geology*, vol. 38, no. 1, pp. 54-66, 6 figs., January-February, 1930.
4. (and others). Mining districts of the Eastern States: 16th International Geol. Cong. United States 1933, Guidebook 2, Excursion A-2, 161 pp., 1932.

Skinner, John A.

1. Fifty-third annual report of the Department of Mines and Mining for the fiscal year 1940, 79 pp., 1 pl., Jefferson City, Missouri, 1941.
2. Fifty-fourth annual report of the Department of Mines and Mining for the fiscal year 1941, 80 pp., Jefferson City, Missouri, 1942.
3. Fifty-fifth annual report of the Department of Mines and Mining for the fiscal year 1942, 94 pp., 1 pl., Jefferson City, Missouri, 1943.
4. Fifty-sixth annual report of the Department of Mines and Mining for the fiscal year 1943, 99 pp., Jefferson City, Missouri, 1944.

Smith, Arthur Frank. Refer also to Ball, S. H., and Buckley, E. R.

1. (and Grenfell, D. S., and McQueen, H. S.). The occurrence of halloysite in Lawrence County, Missouri: *Missouri Geol. Survey and Water Resources*, 58th Bienn. Rept. of the State Geologist, 1933-34, app. 6, 11 pp., 2 pls., 1 fig., 1935.

Smith, Charles A.

1. Report on the strength of building materials: *Missouri Geol. Survey, Preliminary Report on the Iron Ores and Coal fields based on the field work of 1872*, app. 1, pp. 403-413, New York, 1873.

Smith, G. C.

1. The civic interest in the mineral industries of Missouri: *Mineral Industries Conf. Proc.*, Rolla, Missouri, 1938, pp. 31-38, Rolla, Missouri, 1940.

Smith, James Perrin.

1. (and Weller, Stuart). *Prodromites*, a new ammonite genus from the Lower Carboniferous: *Jour. Geol.*, vol. 9, pp. 255-268, 1901; *Chicago Univ. Walker Mus. Contr.* 1 and 3, pp. 33-41, 1901.
2. The Carboniferous Ammonoids of America: *U. S. Geol. Survey Mon.* 42, 211 pp., 29 pls., 1903.

Smith, John Lawrence.

1. Examination of Waconda meteoric stone (near Butler), Bates County, Missouri; and Rockingham County meteoric iron: *Am. Jour. Sci.*, 3d ser., vol. 13, p. 213, 1877.
2. Note on recent fall of three meteoritic stones in Indiana, Missouri, and Kentucky (One fell at lat. 38° 57' long. 91° 10'): *Am. Jour. Sci.*, 3d ser., vol. 13, p. 243, 1877; *Acad. Sci. Paris, Comptes Rendus*, vol. 84, pp. 398-399, 1897.

3. Description of Rochester (Indiana), Warrenton (Missouri), and Cynthiana (Kentucky) meteoric stones, which fell respectively December 21, 1876, January 3, 1877, and January 23, 1877; with some remarks on previous falls of meteorites in same regions: *Am. Jour. Sci.*, 3d ser., vol. 14, pp. 222-224, 1877; *Acad. Sci. Paris, Comptes Rendus*, vol. 85, pp. 678-681, 1877.

Smith, Otto M.

1. (and Standley, P. C.) The Pierson Creek mines: *Bull. Bradley Geol. Field Sta., Drury Coll.*, vol. 1, pt. 2, pp. 72-79, Springfield, Missouri, 1905.

Smith, Ralph W.

1. Limestone mining at Ste. Genevieve, Missouri: *Am. Inst. Min. Met. Engs. Tech. Pub. no. 902, Mining Technology*, pp. 1-23, May, 1938.
2. Technical problems of the lime industry: *Mineral Industries Conf. Proc.*, Rolla, Missouri, 1938, pp. 78-86, Rolla, Missouri, 1940.

Smith, W. C.

1. The petrography of the Bushberg sandstone of Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Smith, William Sidney Tangier. Refer also to Siebenthal, C. E.

1. Lead and zinc deposits of the Joplin district, Missouri-Kansas: *U. S. Geol. Survey Bull.* 213, pp. 197-204, 1903.
2. Water resources of the Joplin district, Missouri-Kansas: *U. S. Geol. Survey Water Supply Paper* 145, pp. 74-83, 1905.
- 2A. Description of the Joplin district (Missouri-Kansas): *U. S. Geol. Survey, Geol. Atlas*, fol. 148, 20 pp., maps, 1907.
3. Jasperoid of the Joplin district, Missouri, Kansas, and Oklahoma: *Geol. Soc. America Bull.*, vol. 33, March, 1921.
4. Fluid inclusions in sphalerite and galena of the Joplin region (abstract): *Am. Mineralogist*, vol. 20, no. 3, p. 204, March, 1935; (abstract) *Geol. Soc. America Proc.*, 1934, pp. 108-109, June, 1935.
5. Secondary character of pebble and ruby jack of the Joplin district: *Econ. Geology*, vol. 30, no. 6, pp. 699-702, September-October, 1935.
6. Ore deposits of the Joplin (Tri-State) region (abstract): *Geol. Soc. America Bull.*, vol. 54, no. 12, p. 1827, December 1, 1943.

Snider, L. C.

1. Preliminary report on the lead and zinc of Oklahoma: *Oklahoma Geol. Survey Bull.* 9, 97 pp., 16 figs., map, 1912.

Snow, J. F. Refer to Beatty, C. E.

Snyder, N. H.

1. Analyses of Missouri coals; Analyses of delivered coal: *U. S. Bur. Mines Tech. Paper* 366, pp. 34-37, 1926.

Speer, Howard. Refer to Bartle, G. G.

Spencer, H. G.

1. Composition of cleaned ores (zinc) of southwest Missouri: Missouri Min. Club Bull., vol. 1, no. 2, pp. 50-51, 1895.
2. Composition of the cleaned ores of lead and zinc produced at Aurora, Missouri: Missouri Min. Club Bull., vol. 1, no. 2, pp. 28-33, 1895.

Spencer, Joseph William Winthrop.

1. The ancient Mississippi and its tributaries: Kansas City Rev. Sci., vol. 6, no. 11, pp. 615-621, 1883.
2. Hummocks and bowlders of decomposition in southeastern Missouri: Am. Naturalist, vol. 21, pp. 366-368, 1887.
3. Primitive origin of soils: Missouri Board Agri., 18th Ann. Rept., pp. 380-390, 1885.
4. Sand-bowlders in drift, or subaqueous origin of drift in central Missouri: Am. Naturalist, vol. 21, pp. 917-923, 1887; (abstract) Am. Assoc. Adv. Sci. Proc., vol. 35, p. 220, 1887.

Springer, Frank. Refer also to Wachsmuth, C.

1. The Crinoidea Flexibilia: The Smithsonian Institution, 486 pp., 51 figs., atlas of 79 pls., 1920.
2. The fossil crinoid genus *Dolatocrinus* and its allies: U. S. Nat. Mus. Bull. 115, 78 pp., 6 figs., 16 pls., 1921.
3. On the fossil crinoid family Catillocrinidae: Smithsonian Misc. Coll., vol. 76, no. 3, 41 pp., 5 pls., August 3, 1923.

Spotswood, Russell.

1. An introduction to the geology of Kansas City, Missouri: Kansas City Museum Bull. 599.4, pp. 1-10, December, 1942.

Springfield, Victor T.

1. The structural geology of parts of St. Louis and St. Louis County, Missouri: Washington University, unpublished thesis, 91 pp., front., il., 26 pl., St. Louis, Missouri, 1927.

Spurr, Josiah Edward.

1. Ore magmas versus magmatic waters: Eng. and Min. Jour.-Press., vol. 119, no. 22, p. 890, May 30, 1925.
2. Alkaline sulphides as collectors of metals: Eng. and Min. Jour.-Press, vol. 120, no. 25, pp. 5-7, December 19, 1925; Bol. minero, t. 21, no. 1, pp. 12-16, January, 1926.
3. Lead-zinc chimneys in limestone: Eng. and Min. Jour., vol. 122, no. 8, pp. 296-298, August 21, 1926.
4. The southeast Missouri ore-magmatic district: Eng. and Min. Jour., vol. 122, no. 25, pp. 3-10, December 18, 1926.
5. Ores of the Joplin region—Picher district: Eng. and Min Jour., vol. 123, no. 5, pp. 2-12, January 29, 1927.
6. Iron ores of Iron Mountain and Pilot Knob: Eng. and Min. Jour., vol. 123, no. 9, pp. 363-366, 4 figs., February 26, 1927.

Staack, J. G.

1. Spirit leveling in Missouri: U. S. Geol. Survey Bull. 898-A, Part 1, Southeastern Missouri 1896-1937, pp. 1-132, 1938; Bull. 898-B, Part 2, South-central Missouri 1896-1937, pp. 133-308, 1938; Bull. 898-C, Part 3, East-central Missouri 1896-1937, pp. 309-450, 1938; Bull. 898-D, Part 4, North-western Missouri 1896-1937, pp. 451-580, 1938; Bull. 898-E, Part 5, Southwestern Missouri 1896-1937, pp. 581-735, 1939; Bull. 898-F, Part 6, North-eastern Missouri 1896-1938, pp. 737-869, 1939; Bull. 898-G, Part 7, Central Missouri 1896-1938, pp. 871-1004, 1939; Bull. 898-H, Part 8, West-central Missouri 1896-1938, pp. 1005-1106, 1939.
2. Transit traverse in Missouri: U. S. Geol. Survey Bull. 916-A, Part 1, Southeastern Missouri 1903-37, pp. 1-124, 1939; Bull. 916-B, Part 2, South-central Missouri 1903-37, pp. 125-295, 1939; Bull. 916-C, Part 3, East-central Missouri 1903-37, pp. 296-439, 1939; Bull. 916-D, Part 4, Northwestern Missouri 1911-1937, pp. 441-563, 1940; Bull. 916-E, Part 5, Southwestern Missouri 1900-37, pp. 565-732, 1940; Bull. 916-F, Part 6, Northeastern Missouri 1900-37, pp. 733-868, 1940; Bull. 916-G, Part 7, Central Missouri 1902-37, pp. 869-1024, 1940; Bull. 916-H, Part 8, West-central Missouri 1906-37, pp. 1025-1156, 1940.

Stahl, H. R.

1. Milling practice of the St. Joseph Lead Company: Am. Inst. Min. Met. Eng. Trans., vol. 153, pp. 603-609, 1943.

Stainbrook, Merrill A.

1. The Devonian system of Iowa; Symposium on Devonian Stratigraphy: Illinois Geol. Survey Bull. 68, pp. 183-188, 1944.

Stammeler, F. W.

1. Coking tests of Missouri coal: U. S. Geol. Survey Bull. 261, pp. 126, 130, 1905.
2. Coking test of Missouri coal: U. S. Geol. Survey Prof. Paper 48, pt. 3, pp. 1351-1353, 1906.

Standley, P. C. Refer to Smith, O. M.

Stauber, I. J.

1. (and Koeberlin, F. R.). Report on the onyx deposits of Boiling Springs Cave: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla Missouri, 1901.

Steel, Alvin Arthur.

1. The geology, mining and preparation of barite in Washington County, Missouri: Am. Inst. Min. Eng. Bull. 38, pp. 85-117, 1910; Trans., vol. 40, pp. 711-743, 1910; Canadian Min. Jour., vol. 31, pp. 138-143, 1910.

Steele, James H.

1. The Joplin zinc district of southwestern Missouri: Colorado School of Mines Bull., vol. 1, pp. 43-50, 1900; Mining and Scientific Press, vol. 80, pp. 640-641, San Francisco, California, 1900.

Steidtmann, Waldo Edward. Refer also to Arnold, C. A.

1. The iron deposits of Pilot Knob: International Geol. Congress, 16th session, Guidebook 2, pp. 68-73, 1 fig., Washington, 1932.

Stephens, H. G.

1. The geology of the Gore area, Warren County, Missouri and petrography of the rocks: Univ. of Missouri, unpublished thesis, Columbia, Missouri 1941.

Stephenson, L. W.

1. (and Monroe, W. H.). Prairie Bluff chalk, and Owl Creek formation of eastern gulf region: Am. Assoc. Petroleum Geologists Bull., vol. 21, no. 6, pp. 809, June, 1937.
2. (and Monroe, W. H.). Stratigraphy of the Upper Cretaceous series in Mississippi and Alabama: Am. Assoc. Petroleum Geologists Bull., vol. 22, no. 12, pp. 1639-1657, 1938.

Stevens, Walter B.

1. The Ozark uplift ... zinc and lead mining industries tributary to the Frisco line: 71 pp., maps, St. Louis (private publication), 1900.

Stewart, Alban.

1. A geological section at Providence, Boone Co., Missouri: Kansas Univ. Quart., vol. 4, pp. 161-162, 1896.

Stewart, Dan R. Refer also to Gilmore, C. W.

1. (and McManamy, L., and McQueen, H. S.). Occurrence of bauxitic clay in Stoddard County, Missouri: Missouri Geol. Survey and Water Resources, 62nd Bienn. Rept. State Geologist, 1941-42, app. 3, 21 pp., 7 pls., 1 map, 1943.
2. (and McManamy, L.). Early Quaternary or late Tertiary folding in the vicinity of Commerce, Scott County, southeastern Missouri (abstract): Missouri Acad. Sci. Trans., vol. 10, in press.

Stewart, Grace Anna.

1. The fauna of the Little Saline limestone in Ste. Genevieve County: Missouri Bur. Geology and Mines, 2d ser., vol. 17, pp. 213-269, pl., 1922.

Stockett, N. A.

1. Mining practices of the St. Joseph Lead Company in southeast Missouri: Am. Inst. Min. Met. Eng. Trans., vol. 153, pp. 59-74, 1943.

Stoddard, Amos.

1. Description of the lead mines in upper Louisiana (Describes the number, extent, situation and manner of working of the lead mines of what is now Missouri.): U. S. Congress, 8th Congress, 2d session; American State Papers, vol. 1, no. 103, pp. 188-191, November 8, 1804.

Stoll, A. Refer to Siebenthal, C. E.

Stone, Ralph W. Refer to Sanford, S. and Schrader, F. C.

Stopff, F.

1. The iron mines of Pilot Knob, Missouri: *Eng. and Min. Jour.*, vol. 9, pp. 259-261, 1870.

Stout, E. L. Refer to McQueen, H. S.

Straube, Elsie Joan.

1. The Florissant basin, St. Louis County: Washington University, unpublished thesis, 107 pp., 42 figs., St. Louis, Missouri, 1933.

Strothmann, F. H.

1. Conodonts from the Kimmswick of eastern Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1940.

Stroup, Robert K.

1. Design and construction of the experimental mine, Rolla, Missouri: Univ. of Missouri, School of Mines and Met., unpublished thesis, 15 pp., maps, Rolla, Missouri, 1922.
2. Dewatering and rehabilitating the Oronogo-Webb City mining area: Univ. of Missouri, School of Mines and Met., unpublished thesis, 40 pp., fold. maps, Rolla, Missouri, 1941.

Suppan, Leo R. A.

1. American and foreign spelter: *Missouri Min. Club. Bull.*, vol. 1, no. 2, pp. 51-52, 1895.

Sutton, Arle Herbert. Refer also to Weller, J. M. and Lamar, J. E.

1. Taxonomy of Mississippian Productidae: *Jour. Paleontology*, vol. 12, no. 6, pp. 537-569, 5 pls., 2 figs., November, 1938; additional note, vol. 13, no. 4, p. 466, July, 1939; abstract, *Geol. Soc. America Proc.* 1937, p. 289, June, 1938.

Swallow, George Clinton.

1. The first annual report of the Geological Survey of Missouri: *Geol. Survey of Missouri*, 22 pp., Jefferson City, Missouri, 1855.
2. The second annual report of the Geological Survey of Missouri: *Geol. Survey of Missouri*, pp. 23-170, 1855.
3. Geology of Marion Co.; Cooper Co.: *Geol. Survey of Missouri, Ann. Rept. 1 and 2*, pp. 171-207, maps, Jefferson City, Missouri, 1855.
4. Third report of progress of the Geological Survey of Missouri, for the years 1855 and 1856: *Geol. Survey of Missouri*, 3 pp., Jefferson City, Missouri, 1857.
5. Southwestern branch of the Pacific railroad (in Missouri): *Mining Magazine*, vol. 9, pp. 220-226, London, 1857.
6. Explanations of the geological map of Missouri, and a section of its rocks (Discusses area and fossils of Coal Measures.): *Am. Assoc. Adv. Sci. Proc.*, vol. 11, pt. 2, pp. 1-21, 1858; (Abstract), *Edinburg New Philosophical Journal*, new ser., vol. 6, p. 354, 1857.
7. Quaternary deposits of Missouri: *Am. Assoc. Adv. Sci. Proc.*, vol. 11, pt. 2, pp. 21-39, 1858.

8. (and Shumard, B. F.). Descriptions of new fossils from the Coal Measures of Missouri and Kansas: St. Louis Acad. Sci. Trans., vol. 1, pp. 198-227, 1858.
9. Fourth report of progress of the Geological Survey of Missouri, for the years 1857 and 1858: Geol. Survey of Missouri, 14 pp., Jefferson City, Missouri, 1859.
10. Description of new fossils from the Carboniferous and Devonian rocks of Missouri: St. Louis Acad. Sci. Trans., vol. 1, pp. 635-660, 1860.
11. Fifth report of progress of the Geological Survey of Missouri, for the years 1859 and 1860: Geol. Survey of Missouri, 19 pp., Jefferson City, Missouri, 1861.
12. Description of some new fossils from the Carboniferous and Devonian rocks of Missouri: St. Louis Acad. Sci. Trans., vol. 2, pp. 81-100, 1863.
13. Some new varieties of *Spirifer* ...: St. Louis Acad. Sci. Trans., Trans., vol. 2, pp. 408-410, 1866.
14. Physical geography of Missouri: Missouri State Board of Agri., Ann. Rept. 2, pp. 58-79, 1867.
15. Geological report of the country along the line of the southwestern branch of the Pacific railroad, State of Missouri: 93 pp., map, St. Louis, 1859; Also published as geological report of the country along the line of the Southwest Pacific railroad, State of Missouri: pp. 63-153, New York, 1867.
16. Geology; mineral and agricultural resources of Missouri, in Parker, N. H., Missouri as it is in 1867 ...: pp. 109-154, Philadelphia, Pennsylvania, 1867.
17. Remarks on the geological map and section of the rocks of Missouri (abstract): Am. Naturalist, vol. 5, pp. 541-542, 1871; Am. Assoc. Adv. Sci. Proc., vol. 20, p. 262, 1872.
18. Report on the property of the St. Louis Marble Co., comprising a topographical, geological and economical presentation of its various properties: 15 pp., 1 pl., 1 map, St. Louis, Missouri, 1873.
19. Geological sketch of the State of Missouri, illustrated by maps: 10 pp., large quarto, St. Louis, Missouri, 1873.
20. Geology, mines, minerals, waters, prairies, timber, and soils of Missouri, in The Commonwealth of Missouri, ed. by Barns, C. R., pp. 497-536, St. Louis, Missouri, 1877; also in Switzler's illustrated history of Missouri, pp. 497-536, St. Louis, Missouri, 1879.
21. Geology of Greene Co., in History of Greene County, Missouri..., pp. 573-575, St. Louis, Western Historical Company, 1883.

Swartz, Charles K.

1. (and others): Correlation of the Silurian formations of North America: Geol. Soc. America Bull., vol. 53, pp. 533-538, 1942.

Swartzlow, Carl Robert.

1. Oolitic rock of secondary origin: Geol. Soc. America Bull., vol. 41, no. 1, p. 168, March 31, 1930; Pan-Am. Geologist, vol. 53, no. 3, pp. 197-200, April, 1930; abstract, p. 304, May, 1930.

2. The diaspora clays of Missouri: *Compass*, vol. 11, no. 4, pp. 131-132, May, 1931.
3. Note on the alteration of galena to anglesite, to cerrussite: *Am. Mineralogist*, vol. 18, no. 4, pp. 174-175, April, 1933.
4. Dolomitization and origin of granularity in Chouteau limestone: *Pan-Am. Geologist*, vol. 59, no. 4, pp. 273-282; no. 5, p. 328-340, 2 pls., May and June, 1933; Univ. of Missouri, thesis, Columbia, Missouri, 1932.
5. Further evidence for secondary oölites: *Jour. Sedimentary Petrology*, vol. 4, no. 1, pp. 47-48, April, 1934.
6. Septarian concretions from northwestern Missouri (abstract): *Missouri Acad. Sci. Proc.* 1934, p. 122, 1935.

Tansey, V. O.

1. The fauna and the correlation of the Bailey limestone in the Little Saline Creek area of Ste. Genevieve County, Missouri: *Missouri Bur. Geol. Mines*, 2d ser., vol. 17, pp. 166-212, 17 pls., 1923.

Tarr, William Arthur.

1. (and Neuman, L. M.). A study of the effects of heat on Missouri granites: *Univ. of Missouri Bull.*, vol. 15, no. 27, 64 pp., Columbia, Missouri, 1914.
2. A study of some heating tests, and the light they throw on the cause of the disaggregation of granite: *Econ. Geology*, vol. 10, pp. 348-367, 1915.
3. Native silver in glacial material at Columbia, Missouri: *Am. Jour. Sci.*, 4th ser., vol. 40, p. 219, 1915.
4. Stylolites in quartzite: *Science*, new ser., vol. 43, pp. 819-820, 1916.
5. Origin of the chert in the Burlington limestone: *Am. Jour. Sci.*, 4th ser., vol. 44, pp. 409-452, 1917.
6. Barite deposits of Missouri (abstract): *Geol. Soc. America Bull.*, vol. 28, p. 132, 1917.
7. The barite deposits of Missouri and the geology of the barite district: *Univ. of Missouri Studies*, vol. 3, no. 1, 111 pp., map, Columbia, Missouri, 1918.
8. Genesis of Missouri lead and zinc deposits (abstract), with discussion by Emmons, W. H., Van Horn, F. R., and Wheeler, H. A.: *Geol. Soc. America Bull.*, vol. 29, pp. 86-87, 1918.
9. Siliceous oölites in shale (abstract): *Geol. Soc. America Bull.*, vol. 29, p. 103, 1918.
10. Glauconite in dolomite and limestone of Missouri (abstract): *Geol. Soc. America Bull.*, vol. 29, p. 104, 1918.
11. The barite deposits of Missouri: *Econ. Geology*, vol. 14, no. 1, pp. 46-67, 2 figs., January-February, 1919.
12. Contribution to the origin of dolomite (abstract): *Geol. Soc. America Bull.*, vol. 30, p. 114, March 31, 1919.
13. The origin of glauconite (abstract): *Science*, new ser., vol. 51, pp. 491-492, May 14, 1920.
14. The possibility of a relationship between crystal types and the mode of occurrence of minerals (abstract): *Science*, new ser., vol. 51, p. 519, May 21, 1920.

15. Notes on concretions (abstract): *Science*, new ser., vol. 51, p. 520, May 21, 1920.
16. A possible factor in the origin of dolomite (abstract): *Science*, new ser., vol. 51, p. 521, May 21, 1920.
17. The minerals of Madison County, Missouri: *Am. Mineralogist*, vol. 6, no. 1, pp. 7-10, January, 1921.
18. Cobalt-nickel-copper-lead deposits of Fredericktown, Missouri (abstract): *Geol. Soc. America Bull.*, vol. 32, no. 1, p. 66, March 31, 1921.
19. Syngenetic origin of concretions in shale: *Geol. Soc. America Bull.*, vol. 32, no. 4, pp. 373-384, 2 figs., December 1, 1921; abstract with discussion, no. 1, pp. 26-27, March 31, 1921.
20. Cone-in-cone: *Am. Jour. Sci.*, 5th ser., vol. 4, pp. 199-213, 11 figs., September, 1922.
21. A high-temperature vein in Madison County, Missouri (abstract): *Geol. Soc. America Bull.*, vol. 34, no. 1, p. 99, March 30, 1923.
22. Intrenched and incised meanders of some streams on the northern slope of the Ozark Plateau in Missouri: *Jour. Geology*, vol. 32, no. 7, pp. 583-600, 8 figs., October-November, 1924.
23. Is the Chalk a chemical deposit? (Compares English flint and Missouri chert.): *Geol. Magazine*, vol. 62, pp. 252-264, London, June, 1925.
24. The origin of chert and flint: *Univ. of Missouri Studies*, vol. 1, no. 2, 46 pp., 3 figs., 8 pls., April 1, Columbia, Missouri, 1926.
25. Silicification of erosion surfaces (discussion): *Econ. Geology*, vol. 21, no. 5, pp. 511-513, August, 1926.
26. Origin of chert and flint (abstract): *Geol. Soc. America Bull.*, vol. 38, no. 1, p. 124, March 30, 1927; *Pan-Am. Geologist*, vol. 47, no. 1, p. 73, February, 1927.
27. Alternating deposition of pyrite, marcasite, and possibly melnikovite: *Am. Mineralogist*, vol. 12, no. 12, pp. 417-421, December, 1927.
28. Syngenetic pyritization in local reducing areas of Pennsylvanian shales in Missouri: *Jour. Geology*, vol. 36, no. 5, pp. 434-439, July-August, 1928; abstract, *Geol. Soc. America Bull.*, vol. 39, no. 1, p. 163, March 30, 1928; *Pan-Am. Geologist*, vol. 49, no. 1, p. 73, February, 1928.
29. A barite vein cutting granite of southeastern Missouri: *Am. Mineralogist*, vol. 17, no. 9, pp. 443-448, 1 fig., September, 1932.
30. Chert and flint; concretions; cone-in-cone; *In* Twenhofel, W. H., *Treatise on sedimentation*, 2d ed., pp. 519-546, 696-716, 716-733, Baltimore, The Williams and Wilkins Co., 1932.
31. Chert and flint, concretions, and cone-in-cone (Rept. Committee on Sedimentation, 1930-32): *Nat. Res. Council Bull.* 89, pp. 90-99, November, 1932.
32. Intrusive relationship of the granite to the rhyolite of southeastern Missouri: *Geol. Soc. America Bull.*, vol. 43, no. 4, pp. 965-992, 14 figs., December 30, 1932; *Pan-Am. Geologist*, vol. 57, no. 3, pp. 231-232, April, 1932; (abstract) *Science*, new ser., vol. 75, p. 265, March 4, 1932.
33. The Miami-Picher zinc-lead district: *Econ. Geology*, vol. 28, no. 5, pp. 463-479, August, 1933.

34. (and Keller, W. D.). A post-Devonian igneous intrusion in south-eastern Missouri: *Jour. Geology*, vol. 41, no. 8, pp. 815-823, November-December, 1933.
35. (and Bryan, J. J.). A hydrothermal deposit in Wayne County, Missouri: *Econ. Geology*, vol. 29, no. 1, pp. 84-92, 5 figs., January-February, 1934.
36. The linnaeite group of cobalt-nickel-iron-copper sulfides: *Am. Mineralogist*, vol. 20, no. 2, pp. 69-80, 4 figs., February, 1935; abstract, *Geol. Soc. America Proc.*, 1933, p. 440, June, 1934.
37. The Miami-Picher zinc-lead district: *Econ. Geology*, vol. 29, no. 8, pp. 779-780, December, 1934.
38. The origin of the Decaturville Dome, in Camden County, Missouri (abstract): *Missouri Acad. Sci. Proc.*, vol. 1, pp. 99-101, 1935.
39. (and Keller, W. D.). Dickite in Missouri: *Am. Mineralogist*, vol. 21, no. 2, pp. 109-114, February, 1936; abstract, no. 3, p. 195, March, 1936.
40. Notes on 1934-35 articles on siliceous sediments (report of committee on sedimentation): *Nat. Res. Council Ann. Rept.*, 1934-35, app. 1, pp. 13-17, September, 1936.
41. Origin of the southeastern Missouri lead deposits, pt. 1: *Econ. Geology*, vol. 31, no. 7, pp. 712-754, 18 figs., incl. index map, November, 1936; pt. 2, no. 8, pp. 832-866, December, 1936.
42. (and Keller, W. D.). Some occurrences of kaolinite deposited from solution (abstract): *Missouri Acad. Sci. Proc.*, vol. 3, no. 4, p. 129, 1937; *Am. Mineralogist*, vol. 22, p. 933, 1937.
43. Origin of the marcasite sink-hole deposits of central Missouri: *Am. Mineralogist*, vol. 22, no. 7, pp. 830-841, figs., incl. index map, July, 1937; abstracts, no. 3, p. 214, March, 1937; *Geol. Soc. America Proc.* 1936, p. 108, June, 1937.
44. The origin of the iron deposits of Pilot Knob, Missouri (abstract): *Missouri Acad. Sci. Proc.*, vol. 4, no. 6, p. 166, March, 1939.

Tarver, Mark.

1. Manufacture of iron in St. Louis, Iron Mountain and iron ore in Missouri: *Western Jour.*, vol. 1, p. 36, 1848.
2. (and Risk, T. F.). Geological survey of the State of Missouri: *Western Jour.*, vol. 3, pp. 76-83, 1850.
3. (and Risk, T. F.). Swamp lands of Missouri: *Western Jour.*, vol. 5, pp. 94-96, 1852.
4. Mineral wealth of Missouri: *Western Jour.*, vol. 6, pp. 229-234, 1853.

Taylor, F. B.

1. Missouri section of Forest City Basin has wide lease play with one test rigged and ready to spud: *Oil Weekly*, vol. 92, pp. 28-36, December 19, 1938.

Taylor, Harold W.

1. Tests of Missouri fire clay: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1900.

Taylor, Richard Cowling.

1. Statistics of coal, the geographical and geological distribution of mineral combustibles of fossil coal, etc.: 754 pp., Philadelphia, Pennsylvania, 1848; 2d edition, revised by Halderman, D. D., 641 pp., Philadelphia, Pennsylvania, 1855.

Thatcher, Richard Whitfield.

1. The bedrock topography of a portion of the city of St. Louis, Missouri: Washington University, unpublished thesis, 51 pp., 27 pl., 2 figs., St. Louis, Missouri, 1927.

Thom, Emma Mertins.

1. Bibliography of North American geology 1929-1939: U. S. Geol. Survey Bull. 937, part 1, bibliography, pp. 1-1063, part 2, index, pp. 1064-1546, 1944.
2. Bibliography of North American geology for 1940 and 1941: U. S. Geol. Survey Bull. 938, 479 pp., 1942.

Thomas, Lewis F.

1. A geographic study of Greene County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1917.
2. An analysis of an urban landscape, St. Louis, Missouri: Missouri Acad. Sci. Proc., vol. 3, no. 4, pp. 16-25, 1937.

Thompson, John Peters.

1. The geology of a part of St. Louis County, Missouri: Washington University, unpublished thesis, 95 pp., 29 pl., 5 figs., St. Louis, Missouri, 1928.

Thompson, Mable.

1. Concerning resources museum, the people's university: Missouri Resources Museum Mimeograph Bull., no. 1.

Thompson, R. O.

1. The lead deposits (of Missouri): Campbell, S. A., Gazetteer of Missouri, pp. 731-745, St. Louis, Missouri, 1874.
2. The iron deposits (of Missouri): Campbell, R. A., Gazetteer of Missouri, pp. 745-754, St. Louis, Missouri, 1874.

Thornberry, Martin H.

1. A treatise on Missouri clays: Univ. of Missouri, School of Mines and Met. Bull., vol. 8, no. 2, 69 pp., 20 ills., 1925.

Thorne, Joshua.

1. The Rosedale coal vein (Kansas City, Missouri): Western Rev. Sci., vol. 2, p. 210, 1878.
2. The Rosedale gas and coal wells (Kansas City, Missouri): Kansas City Rev. Sci., vol. 3, p. 410-412, 1879.

Tice, J. H.

1. Southeast Missouri. Its great and varied mineral and agricultural resources: 3d Rept. Missouri State Board of Agri., pp. 262-269, 1867.

Tiffin, Edward.

1. Lead mines in Louisiana territory (A report on the lead mining of the Missouri region is given.): U. S. Twelfth Cong., 1st Sess., vol. 2, no. 204, p. 380, Washington, 1812.

Tilton, J. L.

1. The proper use of the geological name, "Bethany": Iowa Acad. Sci. Proc., vol. 20, pp. 207-211, 1914.
2. The Missouri series of the Pennsylvanian system in southwestern Iowa: Iowa Geol. Survey, vol. 29, pp. 227-313, 1920.

Tippie, F. E. Refer to Carmody, R. A.

Titcomb, Harold A.

1. The Missouri-Kansas zinc and lead mines: Eng. and Min. Jour., vol. 70, no. 4, pp. 98-100, July 28, 1900.

Todd, James Edward.

1. Annual deposit of Missouri River, during post-Pliocene: Am. Assoc. Adv. Sci. Proc., vol. 26, pp. 289-294, 1877.
2. Richthofen's theory of loess, in light of deposits of the Missouri: Am. Assoc. Adv. Sci. Proc., vol. 27, pp. 231-240, 1878.
- 2A. The Missouri Coteau and its moraines: Am. Assoc. Adv. Sci. Proc., vol. 33, pp. 381-392, 1885.
- 2B. The terraces of the Missouri (abstract): Am. Assoc. Adv. Sci. Proc., vol. 37, pp. 203-205, 1889; Iowa Acad. Sci. Proc., 1890, pp. 11-12.
- 2C. On the relation of loess to drift in southwestern Iowa: Iowa Acad. Sci. Proc., vol. 1, pp. 1875-1880, 1890.
3. Striation of rocks by river ice: Iowa Acad. Sci. Proc., vol. 1, pt. 2, pp. 19-20, Des Moines, Iowa, 1892.
4. Striation of rocks by river ice (Notches scratches on rocks at Cape Girardeau, St. Louis, Glasgow and Wellington): Am. Geologist, vol. 9, pp. 396-400, 1892.
5. Quaternary geology (Describes the drift deposits in the area covered by the Bevier sheet.): Missouri Geol. Survey, 1st ser., vol. 9, Sheet Rept. no. 2, pp. 37-45, Jefferson City, Missouri, 1893.
6. Pleistocene problems in Missouri: Geol. Soc. America Bull., vol. 5, pp. 531-548, 1894.
7. Formation of Quaternary deposits: Missouri Geol. Survey, 1st ser., vol. 10, pp. 11-219, 8 pls., Jefferson City, Missouri, 1896.
- 7A. The moraines of the Missouri Coteau and their attendant deposits: U. S. Geol. Survey Bull. 144, 71 pp., 1896.
- 7B. The Quaternary of Missouri: Science, new ser., vol. 5, pp. 695-696, 1897.
- 7C. More light on the origin of the Missouri River loess: Iowa Acad. Sci. Proc., vol. 13, pp. 187-194, 1906.
- 7D. Drainage of the Kansas ice sheet: Kansas Acad. Sci. Trans., vol. 22, pp. 107-112, 1909.
- 7E. Evidence of Pleistocene crustal movements in the Mississippi Valley: Kansas Univ. Sci. Bull., vol. 6, pp. 375-379, 1912 and 1913; Science, new ser., vol. 33, p. 466, 1911.

- 7F. The Pleistocene history of the Missouri River: *Science*, new ser., vol. 39, pp. 263-274, 1914.
8. Aqueous loess (abstract): *Kansas Acad. Sci. Trans.*, vol. 29, pp. 116-117, 1920.
9. More evidence that Platte River, Nebraska, formerly connected with Grand River, Missouri: *Kansas Acad. Sci. Trans.*, vol. 30, pp. 179-182, 1922.
10. Glacial diversion of the Missouri River: *Pan-Am. Geologist*, vol. 39, no. 3, pp. 169-184, April, 1923.

Toenges, Albert L.

1. Longwall mining methods in some mines of the middle Western States: *U. S. Bureau of Mines Inf. Circ.* 6893, 62 pp., 15 figs., 1936.

Tolman, Carl.

1. Quartz dikes: *Am. Mineralogist*, vol. 16, no. 7, pp. 278-299, July, 1931.
2. Silver-lead-tungsten mineralization at Silver Mine, Missouri (abstract): *Geol. Soc. America Bull.*, vol. 44, pt. 1, pp. 103-104, February 28, 1933.
3. The geology of the Silver Mine area, Madison County, Missouri: *Missouri Bur. Geol. and Mines*, 57th Bienn. Rept. of State Geologist, 1931-32, app. 1, 39 pp., 6 pl., incl. geol. map, 1933.
4. (and Denham, R. L.). Granitic intrusion in the St. Francis Mountains: *Am. Mineralogist*, vol. 20, no. 3, p. 202, March, 1935; *Geol. Soc. America Proc.*, 1934, p. 118, June, 1935.
5. (and Koch, H. L.). The heavy accessory minerals of the granites of Missouri: *Washington Univ. Studies*, new ser., no. 9, pp. 11-50, 5 pls. (incl. geol. map), 13 figs., (incl. sketch map), February, 1936; abstracts, *Am. Mineralogist*, vol. 20, no. 3, p. 208, March, 1935; *Geol. Soc. America Proc.*, 1934, p. 429, June, 1935.
6. (and Goldich, S. S.). The granite, pegmatite, and replacement veins in the Sheahan quarry, Graniteville, Missouri: *Am. Mineralogist*, vol. 20, no. 4, pp. 229-239, 6 figs., April, 1935.
7. (and Goldich, S. S.). A complex pegmatite at Graniteville, Missouri (abstract): *Missouri Acad. Sci. Proc.*, vol. 1, p. 122, 1935.
8. Volcanic activity in southeastern Missouri (abstract): *Pan-Am. Geologist*, vol. 65, no. 2, p. 160, March, 1936; *Geol. Soc. America Proc.* 1935, p. 442, June, 1936.
9. Igneous activity in the Mississippi Valley: *Missouri Acad. Sci. Proc.*, vol. 4, no. 6, pp. 162-163, March, 1939.
10. (and Meyer, C.). Pre-Cambrian iron mineralization in south-east Missouri (abstract): *Econ. Geology*, vol. 34, no. 8, pp. 946-947, December, 1939; *Geol. Soc. America Bull.*, vol. 50, no. 12, pt. 2, pp. 1939-1940, December 1, 1939.
11. (and Landes, K. K.). Igneous rocks of the Mississippi Valley lead-zinc districts: *Geol. Soc. America, Special Papers* no. 24, pp. 71-103, 1939.

Townsend, F. E. Refer to Detweiler, M. H.

Trask, Parker D.

1. Compaction of sediments: *Am. Assoc. Petroleum Geologists*, vol. 16, no. 3, pp. 271-276, 1931.

Triplett, Frank.

1. Onyx and marble—their composition, variety and uses: *Inter-state Min. Conv. Proc.*, pp. 89-94, December, 1891.

Troost, Gerard.

1. (and Lesueur, Charles Alexander). Calamine in Missouri; lead ores of Missouri: *Am. Jour. Sci.*, 1st ser., vol. 12, pp. 376-380, 1827.
2. On the organic remains which characterize the transition series of the valley of the Mississippi, etc.: *Geol. Soc. Pennsylvania Trans.*, vol. 1, pp. 248-250, 1835.

Trowbridge, Raymond M. Refer also to Greene, F. C.

1. Pleistocene glacial deposits and preglacial drainage pattern of northwestern Missouri: *Univ. of Missouri*, unpublished thesis, Columbia, Missouri, 1938.

Trowbridge, S. H.

1. Remarks on the classification and distribution of Producti: *Am. Assoc. Adv. Sci. Proc.*, vol. 30, pp. 193-204, 1882.
2. Geological Survey of Missouri: *Kansas City Rev. Sci.*, vol. 6, pp. 621-626, 1883.

Twenhofel, W. H.

1. Treatise on sedimentation, 2d ed., 926 pp., 121 figs., Baltimore, The Williams and Wilkins Co., 1932.

Ulrich, Edward Oscar. Refer also to Adams, G. I.; Bain, H. F., and Schuchert, C.

1. American Paleozoic Bryozoa: *Cincinnati Soc. Nat. History Jour.*, vol. 5, pp. 121-175, 232-257; vol. 6, pp. 82-92, 148-168, 245-279; vol. 7, pp. 24-51, il., 1882-84.
2. A correlation of the lower Silurian horizons of Tennessee and of the Ohio and Mississippi Valley with those of New York and Canada: *Am. Geologist*, vol. 1, pp. 100-110, 179-190, 305-315; vol. 2, pp. 39-44, 1888.
3. Nomenclature of some Cincinnati group fossils: *Am. Geologist*, vol. 1, pp. 333-335, 1888.
4. Sponges of the Devonian and Carboniferous systems: *Illinois Geol. Survey*, 1st ser., vol. 8, pp. 243-251, il., 1890.
5. (and Everett, O.). Description of lower Silurian sponges: *Illinois Geol. Survey*, 1st ser., vol. 8, pp. 253-282, il., 1890.
6. New lower Silurian Bryozoa: *Cincinnati Soc. Nat. History Jour.*, vol. 12, pp. 173-198, il., 1890.
7. Paleozoic Bryozoa: *Illinois Geol. Survey*, 1st ser., vol. 8; pp. 283-688, il., 1890.
8. New Lamellibranchiata: *Am. Geologist*, vol. 5, pp. 270-284, il., vol. 6, pp. 173-181, 382-389, il., 1890; vol. 10, pp. 96-104, il., 1892.

9. New and little known American Paleozoic Ostracoda: Cincinnati Soc. Nat. History Jour., vol. 13, pp. 104-137, 173-211, il., 1890-91.
10. *Beecherella*, a new genus of lower Helderberg Ostracoda: Am. Geologist, vol. 8, pp. 197-204, il., 1891.
11. The lower Silurian Lamellibranchiata of Minnesota: Minnesota Geol. Survey Final Rept., vol. 3, pt. 2, pp. 475-628, il., 1897; abstract, Minnesota Univ. Quart. Bull., vol. 2, pp. 89-91, 1894.
12. (and Winchell, N. H.). Historical sketch of investigation of the lower Silurian in the Mississippi Valley: Minnesota Geol. Survey Final Rept., vol. 3, pt. 1, pp. 9-54, map, 1895.
13. The lower Silurian Ostracoda of Minnesota: Minnesota Geol. Survey Final Rept., vol. 3, pt. 2, pp. 629-693, il., 1897.
14. (and Scofield, W. H.). The lower Silurian Gastropoda of Minnesota: Minnesota Geol. Survey Final Rept., vol. 3, pt. 2, pp. 813-1081, il., 1897.
15. (and Winchell, N. H.). The lower Silurian deposits of the upper Mississippi province; a correlation of the strata with those in the Cincinnati, Tennessee, New York, and Canadian provinces, and the stratigraphic and geographic distributions of the fossils: Minnesota Geol. Survey, vol. 3, pt. 2, pp. 83-128, 1897.
16. New American Paleozoic Ostracoda: Cincinnati Soc. Natural History Jour., vol. 19, pp. 179-186, il., 1900.
17. Determination and correlation of formations (Paleozoic of northern Arkansas): U. S. Geol. Survey Prof. Paper 24, pp. 90-113, 1904.
18. (and Bassler, R. S.). New American Paleozoic Ostracoda; notes and description of upper Carboniferous genera and species: U. S. Nat. Museum Proc., vol. 30, pp. 149-164, il., 1906.
19. (and Bassler, R. S.). New American Paleozoic Ostracoda; preliminary revision to the Beyrichiidae, with description of new genera: U. S. Nat. Museum Proc., vol. 35, pp. 277-340, il., 1908.
20. The Chattanooga series with special reference to the Ohio shale problem: Am. Jour. Sci., 4th ser., vol. 34, pp. 157-183, 1912.
21. Revision of the Paleozoic systems: Geol. Soc. America Bull., vol. 22, pp. 281-680, map (1911); index, vol. 24, pp. 625-668, 1913.
22. Kinderhookian age of the Chattanooga series (abstract): Geol. Soc. America Bull., vol. 26, pp. 96-99, 1915.
23. The Chester controversy (abstract): Geol. Soc. America Bull., vol. 27, p. 157, 1916.
24. The formation of the Chester series in western Kentucky and their correlates elsewhere: Kentucky Geol. Survey, Mississippian formations of western Kentucky, 272 pp., il., 1917.
25. Some new facts bearing on correlations of Chester formations: Geol. Soc. America Bull., vol. 33, no. 4, pp. 805-852, 2 figs., November 2, 1922.
26. Revision of the Paleozoic systems; Part 2, The Ordovician system (abstract with discussion by Galloway, J. J., and Foerste, A. F.): Geol. Soc. America Bull., vol. 33, no. 1, p. 112, March 31, 1922.
27. (and Bassler, R. S.). Paleozoic Ostracoda; their morphology, classification, and occurrence: Maryland Geol. Survey, Silurian pp. 271-391, 18 figs., 1923.

28. Relative values of criteria used in drawing the Ordovician-Silurian boundary: Geol. Soc. America Bull., vol. 37, no. 2, pp. 279-348, June 30 1926.
29. (and Foerste, A. F. and Bridge, J.). Systematic paleontology (of late Cambrian and Ordovician formations of Ozark region, Missouri): Missouri Bur. Geology and Mines, 2d ser., vol. 24, pp. 186-222, 5 pls., 1930; also issued as separate by Missouri Bur. Geology and Mines, 42 pp., 5 pls., 1931.
30. Naylor ledge, a marine limestone of Canadian age filling caverns in upper Ozarkian formations (abstract): Geol. Soc. America Bull., vol. 42, no. 1, p. 348, March 31, 1931.
31. Ozarkian and Canadian sections in North America and the physical relations of these systems to each other and to the Cambrian beneath and the restricted Ordovician above (abstract): Geol. Soc. America Bull., vol. 43, no. 1, pp. 156-157, March, 1932; Pan-Am. Geologist, vol. 57, no. 1, pp. 73-74, February, 1932.
- 31A. (and Bridge, J.). *Ophileta*, *Polygrata*, and *Lecanospira* (abstract): Geol. Soc. America Bull., vol. 43, p. 278, 1932.
32. (and Bridge, J.). Some new genera of early Paleozoic Gastropoda (abstract): Geol. Soc. America Proc., 1933, p. 338, June, 1934.
33. Physical and time relations of lower Paleozoic systems and formations (abstract, with discussion): Geol. Soc. America Proc., 1934, p. 119, June, 1935.
34. (and Foerste, A. F.). New genera of Ozarkian and Canadian cephalopods: Denison Univ. Bull., vol. 35, no. 17, (Science Laboratory Jour., vol. 30), pp. 259-290, 1 pl., December, 1935.
35. Principles for the correlation and classification of strata, and their application to the lower Paleozoic (abstract with discussion): 16th Internat. Geol. Cong., 1933, Rept., vol. 1, pp. 516-518, 1936.
36. (and Cooper, G. A.). New Silurian brachiopods of the family Tripletiidae: Jour. Paleontology, vol. 10, no. 5, pp. 331-347, 3 pls., 1 fig., July, 1936.
37. (and Cooper, G. A.). New genera and species of Ozarkian and Canadian brachiopods: Jour. Paleontology, vol. 10, no. 7, pp. 616-631, October, 1936.
- 37A. The Murfreesboro limestone in Missouri and Arkansas and some related facts and probabilities: Kansas Geol. Soc. 13th Ann. Field Conf. Rept., pp. 105-109, 1939.
38. (and Foerste, A. F.; Miller, A. K.; and Furnish, W. M.). Ozarkian and Canadian cephalopods; pt. 1, Nautilicones (abstract): Geol. Soc. America Bull., vol. 51, no. 12, pt. 2, p. 1979, December 1, 1940.
39. (and Cooper, G. A.). Chazyan and related brachiopods (abstract): Geol. Soc. America Bull., vol. 52, no. 12, pt. 2, p. 1976, December 1, 1941.
40. (and Foerste, A. F., and Miller, A. K.). Ozarkian and Canadian cephalopods; pt. 2, Brevicones (abstract): Geol. Soc. America Bull., vol. 52, no. 12, pt. 2, p. 1976, December 1, 1941.
41. (and Foerste, A. F.; Miller, A. K.; and Unklesbay, A. G.). Ozarkian and Canadian cephalopods; pt. 3, Longicones and Summary: Geol. Soc. America Special Paper 58, 226 pp., November 27, 1944.

United States Department of Interior, Bureau of Mines.

Note: The following 15 papers were prepared by the Bureau of Mines "to provide essential information to war agencies of the United States Government and assist owners and operators of mining properties in the production of minerals vital to the prosecution of the war."

1. St. Louis Smelting and Refining Company property, Fredericktown, Madison County, Missouri: U. S. Bureau of Mines, War Minerals Report 3, Lead, Copper, Nickel, Cobalt, (planographed), November, 1942.
2. Silver Hollow Bank (Iron deposit) Franklin County, Missouri: U. S. Bureau of Mines, War Minerals Report 51, Iron, (planographed), 24 pp., January, 1943.
3. Oronogo-Webb City-Duenweg district, Jasper County, Missouri: U. S. Bureau of Mines, War Minerals Report 93, Zinc, Lead, (planographed), 9 pp., January, 1943.
4. Crane and Chenoweth Mines, Jasper County, Missouri: U. S. Bureau of Mines, War Minerals Report 93, Zinc, (planographed), 9 pp., March, 1943.
5. Limonite deposits of southeastern Missouri: U. S. Bureau of Mines, War Minerals Report 136, Iron, (planographed), 16 pp., March, 1943.
6. Capital Mining Company, Lawrence County, Missouri: U. S. Bureau of Mines, War Minerals Report 162, Zinc, Lead, (planographed), 5 pp., March, 1943.
7. Little Mary tailing pile, Neck City district (Jasper Co.), Missouri: U. S. Bureau of Mines, War Mineral Report 86, Zinc, (planographed), 7 pp., April, 1943.
8. Tailings on Troupe tract, Eggert lease, Jasper County, Missouri: U. S. Bureau of Mines, War Minerals Report 55, Zinc, (planographed), 7 pp., May, 1943.
9. Oronogo-Webb City-Duenweg zinc-lead district, Jasper County, Missouri, (Supplement to War Minerals Report 93): U. S. Bureau of Mines, War Minerals Report 209, Zinc, Lead, (planographed), 31 pp., May, 1943.
10. St. Louis Smelting and Refining Company property, Fredericktown, Madison County, Missouri; Supplement to War Minerals Report 3: U. S. Bureau of Mines, War Mineral Report 119, Lead, Copper, Nickel, Cobalt, (planographed), 11 pp., June, 1943.
11. Valle Mines dumps, Jefferson and St. Francois Counties, Missouri: U. S. Bureau of Mines, War Minerals Report 215, Zinc, (planographed), 11 pp., June, 1943.
12. Filled sink iron deposits, eastern-central Missouri: Supplement to War Minerals Report 51: U. S. Bureau of Mines, War Minerals Report 133, Iron, (planographed), 34 pp., November, 1943.
13. Drilling in Stoddard County, Missouri: U. S. Bureau of Mines, War Minerals Report 299, Bauxite, (planographed), 11 pp., December, 1944.
14. Southeast Missouri secondary limonite deposits, Wayne, Butler and Ripley Counties, Missouri; Supplement to War Minerals Report 136: U. S. Bureau of Mines, War Minerals Report 322, Iron, (planographed), 32 pp., January, 1945.

15. Dempsey Tract, Washington County, Missouri: U. S. Bureau of Mines, War Minerals Report 325, Zinc, Lead, (planographed), 11 pp., January, 1945.

Updike, Donald F.

1. Investigation of the possibility of a Missouri furnace obtaining an iron ore supply from the State: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1924.

Vanderford, H. B. Refer to Albrecht, W. A.

Van der Gracht, Willem Anton van Waterschoot.

1. Permo-Carboniferous orogeny in United States (discussion): Am. Assoc. Petroleum Geologists Bull., vol. 17, no. 1, pp. 91-96, January, 1933.
2. De Latt-Palaeozoische plooiingsphase in Noord-Amerika: Nederlandsch Aardrijksk. Genootschap, Amsterdam, Tijdschr., 2d ser., vol. 50, no. 6, pp. 903-929, 2 pls., 2 tables, November, 1923; abstract, Pan-Am. Geologist, vol. 61, no. 2, pp. 159-160, March, 1934.

Van Hise, C. R. Refer to Bain, H. F.

Van Horn, F. B.

1. The geology of Moniteau County: Missouri Bur. Geol. and Mines, 2d ser., vol. 3, 104 pp., maps, 1905.

Vannostrand, R. G.

1. Some measurements of magnetic susceptibility of rocks: Missouri Acad. Sci. Proc., vol. 6, no. 4, pp. 90-91, March, 1941.

Van Tuyl, Francis Maurice.

1. The geodes of the Keokuk beds: Am. Jour. Sci., 4th ser., vol. 42, pp. 34-42, 1916.
2. The stratigraphy of the Mississippian formations of Iowa (several references to localities in northeast Missouri, especially when discussing geodes in the Warsaw and Keokuk formations): Iowa Geol. Survey, vol. 30, pp. 33-349, 16 figs., 6 pl. incl. geol. map, 1922.

Ver Wiebe, Walter August.

1. Index to the stratigraphy of eastern Kansas and adjoining areas: Kansas Geol. Soc. Guidebook, 6th Ann. Field Conf., pp. 105-120, 1932.
2. Present distribution and thickness of Mesozoic systems: Geol. Soc. America Bull., vol. 44, pp. 827-864, 1933.

Vogdes, Anthony Wayne.

1. Description of a new crustacean from the Clinton group of Georgia with remarks upon others (*Sedalia trilobites*): 5 pp., il., New York, 1886.
2. Description of two new species of Carboniferous trilobites (Both are from *Sedalia*.): New York Acad. Sci. Trans., vol. 7, pp. 247-251, 1888.

3. Genera of North American Carboniferous trilobites (Species from Missouri are described): New York Acad. Sci. Annals, vol. 4, pp. 69-105, 1888.
 - 3A. A catalogue of North American Paleozoic Crustacea confined to the nontrilobitic genera and species: New York Acad. Sci. Ann., vol. 5, pp. 1-38, 1889.
 4. A bibliography of Paleozoic Crustacea from 1698 to 1889, including a list of North America species and a systematic arrangement of genera: U. S. Geol. Survey Bull. 63, 166 pp., 1890.
 5. Some new *Sedalia* trilobites (one new species described and affinities pointed out): St. Louis Acad. Sci. Trans., vol. 5, pp. 615-618, 1892.
 - 5A. A classed and annotated bibliography of the Paleozoic Crustacea, 1698 to 1892, to which is added a catalogue of North American species: California Acad. Sci., Occas. Papers, vol. 4, 412 pp., 1893.
 - 5B. A supplement to the bibliography of the Paleozoic Crustacea: California Acad. Sci. Proc., 2d ser., vol. 6, pp. 197-198, 1897.
 6. Carboniferous trilobites from Missouri (Describes *Proetus* from Chouteau limestone.): California Acad. Sci. Proc., 2d ser., vol. 6, pp. 197-198, il., 1897.
 7. Paleozoic Crustacea, the publications and notes on the genera and species during the past twenty years, 1895-1917: San Diego Soc. Nat. Hist. Trans., vol. 3, pp. 1-141, 1917.
- Von Engeln, Oscar Dietrich.
1. In Missouri (physiographic features near Columbia, Boone Co., Missouri): Jour. Geography, vol. 10, p. 263-267, 1912.
- Von Groddeck, A.
1. Die Lehre von Lagerstaetten der Erze (Iron Mountain described on pages 145 and 267; and the lead region on p. 237): One vol., 351 pp., Leipzig, 1879.
- Wachsmuth, Charles.
1. (and Springer, F.). Revision of the Palaeocrinoidea: Philadelphia Acad. Nat. Sci. Proc. 1879, pp. 226-378; 1881, pp. 177-414; 1885, pp. 225-364; 1886, pp. 64-226.
 2. (and Springer, F.). New species of crinoids and blastoids: Illinois Geol. Survey, 1st ser., vol. 8, pp. 155-208, 1890.
 3. (and Springer, F.). The North American Crinoidea *Camerata*: Harvard Coll. Museum Comp. Zoology Memoirs, vols. 1 and 2, 837 pp., 83 pls., 1895.
- Wadsworth, M. E.
1. (and Whitney, J. D.). Azoic system and its proposed subdivisions: Bull. Museum Comparative Zoology, vol. 7, p. 482, Cambridge, Massachusetts, 1884.
- Waldram, R. J.
1. Conodonts from the Cooper limestone of Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1942.

Walka, Joseph August.

1. The geography of the Grays Summit Saddle: Washington University, unpublished thesis, 64 pp., 29 figs., 4 pl., St. Louis, Missouri, 1936.
2. Physiography of Grays Summit saddle in Missouri (abstract): *Geol. Soc. America Bull.*, vol. 49, pp. 1904-05, 1938.

Walker, Thomas Henry.

1. The geology of the northwest quarter of the Ironton quadrangle: Washington Univ., unpublished thesis, 91 pp., 25 figs., St. Louis, Missouri, 1942.

Wallace, Alan Joseph.

1. The Lamotte sandstone in the region of the Farmington anticline: Washington University, 104 pp., 17 figs., 10 pl., 8 tables, St. Louis, Missouri, 1938.

Wallace, C. R.

1. The Productidae of the Chouteau limestone: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1930.

Walsh, F. H.

1. (and May, L.). Power utilization of Meramec Spring: Univ. of Missouri, School of Mines and Met., unpublished thesis, Rolla, Missouri, 1902.

Walter, Edward J.

1. Longitudinal wave-velocities in the Mississippi Valley (abstract): *Am. Geophys. Union Trans.*, 21st Ann. Mtg. Pt. 1, p. 241 (mimeographed), Nat. Research Council, July, 1940.
2. Local earthquake and crystal layering immediately south of St. Louis (abstract): *Missouri Acad. Sci. Proc.* 1941, vol. 7, no. 4, p. 113, January 25, 1942.

Wanless, Harold L.

1. (and Weller, J. M.). Correlation and extent of Pennsylvanian cyclothem: *Geol. Soc. America Bull.*, vol. 43, p. 1013, 1932.

Ward, Henry Augustus.

1. The Ste. Genevieve (Missouri) meteorite: *Rochester Acad. Sci. Proc.*, vol. 4, pp. 65-66, 1901.
2. The Billings (Christian Co.) meteorite, a new iron meteorite from southern Missouri: *Am. Jour. Sci.*, 4th ser., vol. 19, pp. 240-242, 1905.

Waring, W. G.

1. The zinc ores of the Joplin District: Their composition, character and variation: *Am. Inst. Min. Eng. Trans.*, vol. 57, pp. 657-670, 1917.

Warren, G. K.

1. Bridging of the Mississippi (Reference is made to geology of the state.): *U. S. Top. Eng., Ann. Rept. for 1888*, app. 10, p. 916, Washington, 1878.

Watt, A. P.

1. Concentration practice in southeast Missouri: *Am. Inst. Min. Eng. Trans.*, vol. 57, pp. 322-419, 1917.

Weeks, F. B.

1. Bibliography of North American geology, paleontology, petrology, and mineralogy for the years 1892-1900, inclusive and index: *U. S. Geol. Survey Bull.* 188, 717 pp., *Bull.* 189, 337 pp., 1902.
2. North American geologic formation names; Bibliography, synonymy, and distribution: *U. S. Geol. Survey Bull.* 191, 448 pp., 1902.
3. Bibliography and index of North American geology for the years 1901-1905, inclusive: *U. S. Geol. Survey Bull.* 301, 770 pp., 1906.
4. (and Nickles, J. M.). Bibliography of North American geology for the years 1906 and 1907, with subject index: *U. S. Geol. Survey Bull.* 372, 317 pp., 1909.

Weidman, S.

1. The Miami-Picher zinc-lead district: *Oklahoma Geol. Survey Bull.* 56, 1932.
2. The Tri-State zinc-lead region: *International Geological Congress 16th Session, Guidebook 2*, pp. 74-91, 6 figs., incl. map, Washington, 1932.
3. Tourmaline in jasperoid of the Miami-Picher zinc-lead district (abstract): *Geol. Soc. America Proc.* 1933, pp. 117-118, June, 1934.

Weigel, William Melville.

- The barite industry in Missouri: *Am. Inst. Min. Met. Eng. Tech. Pub.* 201, 26 pp., 8 figs., March, 1929; *Trans.* 1929, Year Book, pp. 256-279, 8 figs., 1929.

Weigel, William Walbridge.

1. Coal mining methods in Missouri: *Univ. of Missouri, School of Mines and Met. Bull., Tech. Ser.*, vol. 5, no. 4, pp. 1-118, Rolla, Missouri, May, 1921.
2. Small scale mining possibilities in southeast Missouri: *Univ. of Missouri, School of Mines and Metallurgy*, unpublished thesis, 23 pp., 1 fold. map, Rolla, Missouri, 1936.
3. Mine drainage, Southeast Missouri lead district: *Am. Inst. Min. Met. Engr. Trans.*, vol. 153, pp. 74-82, 1943.

Weller, J. Marvin. Refer also to *Kansas Geol. Soc. Guidebooks*, Wanless, H. L., and Dunbar, C. O.

1. On some of Gurley's unfigured species of Carboniferous *Bellerophon*: *Illinois Acad. Sci. Trans.*, vol. 21, pp. 313-325, 1 pl., February, 1929.
2. A group of larviform crinoids from lower Pennsylvanian strata in the eastern Interior basin: *Illinois State Geol. Survey Rept. Inv.* 21, 38 pp., 8 figs., 2 pls., 1930.
3. Cyclical sedimentation of the Pennsylvanian period and its significance: *Jour. Geology*, vol. 38, no. 2, pp. 97-135, 6 figs., February-March, 1930.

4. Ophiuroid remains of Pennsylvanian age: Jour. Paleontology, vol. 44, no. 1, pp. 1-13, 1 pl., March, 1930.
5. The conception of cyclical sedimentation during the Pennsylvanian period: Illinois State Geol. Survey Bull. 60, pp. 163-177, 1931.
6. Sedimentary cycles in the Pennsylvanian strata; a reply: Am. Jour. Sci., 5th ser., vol. 21, pp. 311-329, April, 1931.
7. Pennsylvanian overlap in United States (discussion): Am. Assoc. Petroleum Geologists Bull., vol. 15, no. 6, pp. 704-707, June, 1931.
8. Pallial sinuses of *Composita argenticola*: Illinois State Acad. Sci. Trans., vol. 24, no. 2, pp. 354-359, 3 figs., December, 1931.
9. (and McGehee, R.). Typical form and range of *Mesolobus mesolobus*: Jour. Paleontology, vol. 7, no. 1, pp. 109-110, March, 1933.
10. Tri-State geological field conferences of the upper Mississippi Valley: Science, new ser., vol. 79, no. 2039, pp. 80-82, January 26, 1934.
11. The Warsaw formation (abstract): Illinois State Acad. Sci. Trans., vol. 26, no. 3, p. 106, March, 1934.
12. Variations in Pennsylvanian sedimentary environment (abstract): Geol. Soc. America Proc., 1933, p. 118, June, 1934.
13. Boundaries of Pennsylvanian cyclothems (abstract): Illinois State Acad. Sci. Trans., vol. 27, no. 2, p. 121, December, 1934.
14. "Grassy Creek" shale: Illinois State Acad. Sci. Trans., vol. 28, no. 2, pp. 191-192, December, 1935.
15. (and Sutton, A. H.). Mississippian border of eastern Interior basin: Am. Assoc. Petroleum Geologists Bull., vol. 24, no. 5, pp. 765-858, 15 figs. incl. index and geol. maps, May, 1940; correction, no. 6, p. 1133, June, 1940; Illinois Geol. Survey Rept. Inv. 62, pp. 765-858, 15 figs., incl. geol. maps, 1940.
16. Review of Phacopid trilobites of North America, by Delo, D. M., 1940: Jour. Paleontology, vol. 15, no. 6, pp. 696-699, November, 1941.
17. Review of Stratigraphy of the eastern and central United States, by Charles Schuchert, 1943: Jour. Paleontology, vol. 18, no. 2, pp. 220-221, March, 1944.
18. Devonian correlations in Illinois and surrounding states; Symposium on Devonian Stratigraphy: Illinois State Geol. Survey Bull. 68, pp. 205-213, 1 fig., 1944.
19. Devonian system in southern Illinois: Symposium on Devonian Stratigraphy: Illinois State Geol. Survey Bull. 68, pp. 89-102, 1944.

Weller, Stuart. Refer also to Smith, J. P.

1. A circum-insular Paleozoic fauna (Ozark island in Devonian time): Jour. Geology, vol. 3, pp. 903-912, 1895.
2. The succession of fossil faunas at Springfield, Missouri: Am. Jour. Sci., 3d ser., vol. 49, pp. 185-199, 1895.
3. Correlation of the Devonian faunas in southern Illinois (and Missouri): Jour. Geology, vol. 5, pp. 625-635, 1897.
4. A bibliographic index of North American Carboniferous invertebrates: U. S. Geol. Survey Bull. 153, pp. 653, 1898.
5. Description of a new species of *Hydreionocrinus* from the Coal Measures of Kansas and Kansas City: New York Acad. Sci. Trans., vol. 16, pp. 372-374, il., 1898.

6. Classification of the Mississippian series: Jour. Geology, vol. 6, pp. 303-314, maps, 1898.
7. Osage vs. Augusta: Am. Geologist, vol. 22, pp. 12-16, 1898.
8. Kinderhook faunal studies; I. The fauna of the vermicular sandstone at Northview, Webster Co., Missouri: St. Louis Acad. Sci. Trans., vol. 9, pp. 9-51, il., 1899.
9. Kinderhook faunal studies; II. The fauna of the *Chonopectus* sandstone at Burlington, Iowa: St. Louis Acad. Sci. Trans., vol. 10, pp. 57-129, il., 1900.
10. Kinderhook faunal studies; III. The faunas of beds no. 3 to no. 7 at Burlington, Iowa: St. Louis Acad. Sci. Trans., vol. 11, pp. 147-214, il., 1901.
11. Correlation of the Kinderhook formations of southwestern Missouri: Jour. Geology, vol. 9, pp. 130-148, 1901.
12. (and Smith, J. P.). *Prodromites*, a new ammonite genus from the lower Carboniferous: Jour. Geology, vol. 9, pp. 255-268, il., 1901.
13. *Paraphorhynchus*, a new genus of Kinderhook Brachiopoda: St. Louis Acad. Sci. Trans., vol. 15, pp. 259-264, il., 1905.
14. The northern and southern Kinderhook faunas: Jour. Geology, vol. 13, pp. 617-634, 1905.
15. Kinderhook faunal studies; IV. The fauna of the Glen Park limestone: St. Louis Acad. Sci. Trans., vol. 16, pp. 435-471, il., 1906.
- 15A. Notes on the Geology of southern Calhoun County (Illinois): Illinois State Geol. Survey Bull. 4, pp. 219-233, 1907.
16. Kinderhook faunal studies; V. The fauna of the Fern Glen formation: Geol. Soc. America Bull., vol. 20, pp. 265-332, il., 1909.
17. Correlation of the middle and upper Devonian and the Mississippian faunas of North America: Jour. Geology, vol. 17, pp. 257-285, 1909.
18. The fauna of the Fern Glen formation (abstract): Science, new ser., vol. 29, p. 636, 1909.
19. Internal characters of some Mississippian rhynchonelliform shells: Geol. Soc. America Bull., vol. 21, pp. 497-516, il., 1910.
20. Genera of Mississippian loop-bearing Brachiopoda: Jour. Geology, vol. 19, pp. 439-448, il., 1911.
21. Stratigraphy of the Chester group in southwestern Illinois: Illinois State Acad. Sci. Trans., vol. 6, pp. 118-129, 1913.
22. The Mississippian Brachiopoda of the Mississippi Valley basin: Illinois State Geol. Survey Mon. 1, pp. 598, il., 1914.
23. (and Mehl, M. G.). Western extension of some Paleozoic faunas in southwestern Missouri (abstract): Geol. Soc. America Bull. vol. 25, pp. 135-136, 1914.
24. Description of a Ste. Genevieve limestone fauna from Monroe Co., Illinois: Chicago Univ., Walker Mus. Contributions, vol. 1, pp. 243-264, il., 1916.
25. Stratigraphic and faunal succession of the Chester group in Illinois and Kentucky (abstract): Geol. Soc. America Bull., vol. 27, p. 156, 1916.
26. Former extension of the Devonian formations in southeastern Missouri (abstract): Geol. Soc. America Bull., vol. 27, pp. 160, 1916.

- 26A. Faunal zones in the standard Mississippian section: *Jour. Geology*, vol. 34, pp. 320-335, 1926.
- 27. (and St. Clair, S.). *Geology of Ste. Genevieve County, Missouri*: Missouri Bur. Geol. and Mines, 2d ser., vol. 22, 352 pp., 15 pls., 1928.

Wells, Horace L. Refer to Pirrson, L. V.

Wells, T. L.

- 1. Tri-State today: *Explosives Engineer*, vol. 19, no. 10, pp. 306-311, October, 1941.

Wentworth, Chester Keeler.

- 1. *Geology of dam sites, Gasconade River in Missouri*, app. 4 of Letters from the Secretary of War transmitting report from the Chief of Engineers on the Gasconade River, Missouri, covering navigation, flood control, power development, and irrigation: U. S. 72d Cong. 1st sess., House Doc. 188, pp. 151-156, pls. in app. 1, 1932.
- 2. *Geology of dam sites, Grand River, of Missouri*, app. 6 of Letter from the Secretary of War transmitting report from the Chief of Engineers on Grand River, Missouri and Iowa, covering navigation, flood control, power development and irrigation: U. S. 72d Cong., 1st sess., House Doc. 236, pp. 189-195, pls. in app. 1, 1932.
- 3. *Striated rock surfaces in the St. Francis River Valley*: *Am. Jour. Sci.*, 5th ser., vol. 20, no. 172, pp. 264-368, 2 figs., April, 1935.

West, E. P.

- 1. Following the pick and spade (drainage changes in Kansas City, Missouri area): *Kansas City Rev. Sci.*, vol. 3, pp. 328-330, 1879.
- 2. Age of the Missouri River: *Kansas City Rev. Sci.*, vol. 7, pp. 25-28, 1883.
- 3. Last submersion and emergence of southeastern Kansas from the Carboniferous seas, or those affecting the Carboniferous formation in Kansas: *Kansas Acad. Sci. Trans.*, vol. 9, pp. 106-109, Topeka, Kansas, 1884.

West, H. H.

- 1. Report on discovery of mastodon tusk (in Kansas City, Missouri): *Western Rev. Science*, vol. 1, pp. 336-337, 1877.

Westgate, Louis G.

- 1. Geographic development of eastern part of Mississippi drainage: *Am. Geologist*, vol. 11, pp. 245-260, 1891.

Westland, Anthony J.

- 1. The Illinois Basin earthquake of November 17, 1937: *Earthquake Notes*, vol. 9, no. 3, pp. 5-6, mimeographed, December, 1937.

Wetmore, A.

- 1. Catalogue of minerals; *Gazeteer of the State of Missouri*, 5 pp., St. Louis, Missouri, 1837.

Wheeler, E. S. Refer to O'Harra, B. M.

Wheeler, Herbert Allen. Refer also to Luedeking, C.

1. Further notes on artificial lead silicate from Bonne Terre, Missouri: *Am. Jour. Sci.*, 3d ser., vol. 22, pp. 262-273, 1889.
2. Notes on ferro-goslarite, a new variety of zinc sulphate: *Am. Jour. Sci.*, 3d ser., vol. 41, p. 212, 1891.
3. Clays and shales: *Missouri Geol. Survey*, 1st ser., vol. 9, Sheet Report no. 2, Bevier Sheet, pp. 57-67, Jefferson City, Missouri, 1893.
4. Note on the glacial drift in St. Louis: *St. Louis Acad. Sci. Trans.*, vol. 7, pp. 121-122, 1895.
5. Note on an occurrence of blende in lignite: *St. Louis Acad. Sci. Trans.*, vol. 7, pp. 123-125, 1895; *Eng. and Min. Jour.*, vol. 59, p. 248, 1895.
6. Recent additions to mineralogy of Missouri: *St. Louis Acad. Sci. Trans.*, vol. 7, pp. 126-131, 1895.
7. Clay deposits: *Missouri Geol. Survey*, 1st ser., vol. 11, 622 pp., maps, Jefferson City, Missouri, 1896.
8. Clay resources of Missouri: *Eng. and Min. Jour.*, vol. 66, pp. 426-427, 1898.
9. Notes on the source of the southeast Missouri lead: *Eng. and Min. Jour.*, vol. 77, pp. 517-518, 1904.
10. The fire clays of Missouri: *Am. Inst. Min. Eng. Trans.*, vol. 35, pp. 720-734, 1905; abstract, *Eng. and Min. Jour.*, vol. 78, pp. 834-835, 1904.
11. The occurrence of oil and gas about St. Louis: *St. Louis Acad. Sci. Trans.*, vol. 18, pp. 29-33, 1910.
12. Geology of southeast Missouri lead district: *Eng. and Min. Jour.*, vol. 89, pp. 465-466, 1910.
13. An appreciation of H. A. Buehler (1876-1944): *Eng. and Min. Jour.*, vol. 145, no. 5, p. 100, May, 1944.

Wherry, Edgar Theodore.

1. Diasporite in Missouri: *Am. Mineralogist*, vol. 2, p. 139, 1917.
2. Famous mineral localities; 1. The Keokuk geode region: *Am. Mineralogist*, vol. 3, pp. 3-5, 1918.
3. (and Hawkins, A. C.). Famous mineral localities; 4. The Joplin district: *Am. Mineralogist*, vol. 3, pp. 36-37, 1918.

Whipple, S. H.

1. Description of Mastodon bones found in Benton County, Missouri: *Am. Philosophical Soc. Proc.*, vol. 4, pp. 35-36, 1865.

White, Charles Abiathar.

1. Description of new species of fossils from Devonian and Carboniferous rocks in the Mississippi Valley: *Boston Soc. Nat. History Proc.*, vol. 9, pp. 8-32, 1862.
2. (and Whitfield, R. P.). Observations upon rocks of the Mississippi Valley which have been referred to Chemung group of New York, together with descriptions of new species of fossils from same horizon at Burlington, Iowa (Missouri forms are noted.): *Boston Soc. Nat. History Proc.*, vol. 8, pp. 289-316, 1862.

3. Fossils from Carboniferous rocks of the interior states: U. S. Geol. and Geog. Survey of the Territories, 12th Ann. Rept. 1878, pp. 155-171, 1883.

White, Charles David.

1. Flora of the outlying Carboniferous basins of southwestern Missouri: U. S. Geol. Survey Bull. 98, 139 pp., pls. 1-5, 1893.
2. A new taeniopteroid fern and its allies: Geol. Soc. America Bull., vol. 4, pp. 119-132, 1893.
3. Age of the lower coals of Henry County, Missouri: Geol. Soc. America Bull., vol. 8, pp. 287-304, 1897.
4. *Omphalophloios*, a new Lepidodendroid type: Geol. Soc. America Bull., vol. 9, pp. 329-342, pls. 20-23, 1898.
5. Fossil flora of the lower Coal Measures of Missouri: U. S. Geol. Survey Mon. 37, 467 pp., 73 pls., 1899.
6. Notes on the fossil floras of the Pennsylvanian in Missouri: Missouri Bur. Geol. and Mines, 2d ser., vol. 13, pp. 256-262, 1915.

Whitfield, R. P. Refer to White, C. A.

Whittelsey, Charles C.

1. Missouri and its resources: Hunt's Merchants Mag., vol. 8, p. 535, 1843.

Whitney, J. D. Refer also to Wadsworth, M. E.

1. Report on the lands of the Birmingham Iron Mining Company: St. Louis, Missouri, 1853.
2. The metallic wealth of the United States, described and compared with that of other countries (accounts of the Missouri copper ores, pp. 310-312; lead, pp. 417-421; and iron, pp. 478-481): Philadelphia, Pennsylvania, 1854.
3. Prospectus of the Stanton Mining Company, St. Louis, Missouri, 1855.
4. The lead deposits of the Mississippi Valley: The Min. Mag., 2d ser., vol. 1, pp. 89-102, 169-184, 1859.

Whorton, Chester.

1. (and Clark, J. M.). Mineola dome of northeastern Missouri (abstract): Pan-Am. Geologist, vol. 45, no. 3, p. 250, April, 1926; Univ. of Missouri, thesis, Columbia, Missouri, 1926.

Wick, John D.

1. Washing tests of Missouri coal: U. S. Geol. Survey Bull. 261, pp. 64, 65, 70, 71, 1905.
2. Washing tests of Missouri coal: U. S. Geol. Survey Prof. Paper 48, pt. 3, p. 1471, 1906.

Wilber, C. D.

1. Mineral wealth of Missouri. Two lectures delivered in the Hall of Representatives, at Jefferson City, Missouri, Feb. 17 and 18, 1870, 67 pp., St. Louis, Missouri, 1870.

Wilkerson, Albert S.

1. Possible sources of some boulders in the glacial drift of Missouri: *Science*, new ser., vol. 65, p. 404, April, 1927.

Williams, Albert, Jr.

1. Mineral resources of the United States, 1882 (This, first volume, contains the following Missouri reports: Coal of Missouri, pp. 60-61; lead, p. 312; Nickel of Mine La Motte, p. 403; Missouri copper, p. 230; Ores, Minerals and Mineral substances of industrial importance, reported by John C. Smock; pp. 699-702): U. S. Geol. Survey, 1883.
2. Mineral resources of the United States, calendar years 1883 and 1884 (This volume has: Coal, pp. 51-52; Cobalt, pp. 545-546; Copper, p. 342; Iron ore, pp. 268-270; Lead, pp. 425-427; Lithographic stone, p. 935; Mineral waters pp. 982-983; Salt, p. 843; Tin, p. 602; Tungsten, p. 574; Zinc, pp. 475-476): U. S. Geol. Survey, 1885.

Williams, Charles Penrose.

1. Tin in Missouri: *Jour. Franklin Institute*, vol. 57, 3d ser., no. 6, p. 376, Philadelphia, Pennsylvania, 1869.
2. New mineral discoveries in Missouri: *Am. Exchange and Rev.*, Philadelphia, Pennsylvania, September, 1871.
3. Contributions to a knowledge of the iron ores of Missouri: *Catalogue of the Univ. of Missouri*, pp. 133-147, 1872.
4. The Missouri zinc ores and their products: *Catalogue of Univ. of Missouri*, pp. 149-159, June, 1874.
5. Contributions from the laboratory of the Missouri School of Mines. (Discusses lead, zinc and iron of Missouri.): *Catalogue of the Univ. of Missouri*, pp. 195-208, June, 1875.
6. Report to the Board of Curators concerning the transfer of the Geological Survey to the School of Mines and the work executed during the year: *Catalogue of Univ. of Missouri*, pp. 213-216, July, 1876.
7. Contributions from the laboratory of the School of Mines (Contains chemical analyses of Missouri leads, copper, and zinc taken from various Missouri smelters.): *Catalogue of Univ. of Missouri*, pp. 197-212, July, 1876.
8. Some points in the treatment of lead ores in Missouri: *Am. Inst. Min. Eng. Trans.*, vol. 5, pp. 314-329, 1876-77.
9. Industrial report on lead, zinc and iron, together with notes on Shannon County and its copper deposits: *Missouri Geol. Survey*, 177 pp., Jefferson City, Missouri, 1877.
10. Note on the occurrence of gold in north Missouri: *Missouri Geol. Survey Industrial report on lead, zinc and iron*, app. B, pp. 181-183, Jefferson City, Missouri, 1877.
11. Notes on the preparation of zinc oxide: *Am. Inst. Min. Eng. Trans.*, vol. 5, pp. 422-425, 1877-1878.
12. The specific gravity of certain leads: *Am. Inst. Min. Eng. Trans.*, vol. 5, pp. 615-618, 1877-1878.
13. Analysis of mine water from the lead region of southwest Missouri: *Am. Chem. Soc. Proc.*, vol. 1, p. 179, 1877.

Williams, George K.

1. Fifteenth annual report of the State Lead and Zinc Mine Inspector of the State of Missouri for the year ending December 31, 1901, 245 pp., Jefferson City, Missouri, 1902.
2. Sixteenth annual report of the State Lead and Zinc Mine Inspector of the State of Missouri for the year ending December, 1903.
3. Eighteenth annual report of the Bureau of Mines and Mine Inspection of the State of Missouri embracing reports on lead, zinc, coal and other mines, year ending December 31, 1904, 479 pp., 15 pls., and charts, Jefferson City, Missouri, 1905.
4. Twenty-first annual report of the Bureau of Mines and Mine Inspector, 1907.

Williams, Henry Shaler.

1. Fossil faunas of upper Devonian (The equivalency of the Chouteau with other beds is noticed.): U. S. Geol. Survey Bull. 41, 183 pp., 1877.
2. Correlation papers—Devonian and Carboniferous: U. S. Geol. Survey Bull. 80, 279 pp., 1891.
3. Scope of paleontology and its value to geologists: Am. Geologist, vol. 10, pp. 148-169, 1892.
4. Origin of Chouteau fauna: Jour. Geology, vol. 4, pp. 283-290, 1896.
- 4A. The Devonian interval in northern Arkansas: Am. Jour. Sci., 4th ser., vol. 8, pp. 139-152, 1899.
- 4B. The Paleozoic faunas of northern Arkansas: Arkansas Geol. Survey Ann. Rept. for 1892, vol. 5, pp. 267-362, 1900.
5. Upper Paleozoic faunas of Missouri: Pan-Am. Geologist, vol. 37, no. 1, pp. 35-40, February, 1922.

Williams, J. Francis.

1. Igenous rocks of Arkansas (references to crystallines of Missouri) Arkansas Geol. Survey Ann. Rept. 1890, vol. 2, 456 pp., 3 maps, Little Rock, Arkansas, 1891.

Williams, James Steele. Refer also to Branson, E. B.

1. Louisiana limestone of northeastern Missouri (abstract): Pan-Am. Geologist, vol. 45, no. 3, p. 252, April, 1926; Univ. of Missouri, thesis, Columbia, Missouri, 1924.
2. Pelecypoda of the Louisiana limestone: Missouri Bur. Geology and Mines, 56th Bienn. Rept. State Geologist, 1929-30, app. 2, pp. 132-145, 1 plate, 1931; abstract, Pan-Am. Geologist, vol. 53, no. 4, p. 301, May, 1930.
3. A color pattern on a new Mississippian trilobite: Geol. Soc. America Bull., vol. 41, no. 1, pp. 178-179, March, 1930; Pan-Am. Geologist, vol. 53, no. 4, p. 302, May, 1930; Am. Jour. Sci. 5th ser., vol. 20, pp. 61-64, July, 1930.
4. A new Pennsylvanian trilobite from Missouri: Washington Acad. Sci. Jour., vol. 23, no. 9, pp. 429-435, 2 figs., September, 1933.
5. Correlation of the Louisiana limestone with beds at Kinderhook, Illinois and Burlington, Iowa (abstract): Washington Acad. Sci. Jour., vol. 24, no. 11, pp. 480-491, November, 1934.
6. Stratigraphic sections and faunules of some western Carboniferous formations at or near the type localities (abstract): Geol. Soc. America Proc. 1935, pp. 118-119, June, 1936.

7. Robert Roswell Rowley, 1854-1935: *Jour. Paleontology*, vol. 10, no. 3, p. 228, April, 1936.
8. Stratigraphy and fauna of the Louisiana limestone of Missouri: *U. S. Geol. Survey Prof. Paper* 203, 133 pp., 9 pl., 1943.

Williams, Walter.

1. *The State of Missouri*, Jefferson City, Missouri, 1904.

Williams, R. Z.

1. Technical problems of the Missouri pyrite industry: *Mineral Industries Conf. Proc.*, Rolla, Missouri, 1938, pp. 73-76, Rolla, Missouri, 1940.

Williams, W. S.

1. (and Roberts, R. W.). An investigation of the road making properties of Missouri stone and gravel: *Univ. of Missouri, Eng. Exp. Sta. Bull.*, vol. 2, no. 3, 70 pp., Columbia, Missouri, September, 1911.

Willis, Bailey.

1. Index to the stratigraphy of North America, accompanied by a geologic map of North America compiled by the United States Geological Survey in cooperation with the Geological Survey of Canada and the Instituto Geologico de Mexico, under the supervision of Bailey Willis and G. W. Stose: *U. S. Geol. Survey Prof. Paper* 71, 894 pp., 1 pl., 1912.

Willis, R. B. Refer to Bernard, C. R.

Wilmarth, M. Grace.

1. *Lexicon of geologic names of the United States*: *U. S. Geol. Survey Bull.* 896, 2 parts, 2396 pp., 1938.

Wilson, John N.

1. (and Clerc, F. L. and Davey, T. N.). Lead and zinc ore of southwest Missouri mines. *Authenticated Statistics. The output of lead and zinc ores from this mining district for the year ending March 1, 1887*: *Jasper County Democrat*, Carthage, Missouri, 32 pp., 1887 (?).

Wilson, L. A.

1. *Wilson's history and directory for southeast Missouri and southern Illinois* (This has a catalogue of the lead mines of that part of the state that were worked in 1818, as well as statistics of later date.): Cape Girardeau, Missouri, 1875-76.

Wilson, Malcolm Earl.

1. Oil and gas possibilities in the Belton area: *Missouri Bur. Geol. and Mines, Oil and Gas Bull.*, 39 pp., maps, 1918.
2. The occurrence of oil and gas in Missouri: *Missouri Bur. Geol. and Mines, 2d. ser.*, vol. 16, 284 pp., maps, 1922.

Wilson, Walter Byron.

1. A study of clay slips in coal mines: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1914.
2. The origin of clay slips: *Econ. Geol.*, vol. 11, pp. 381-389, 1916.

Wilson, W. P.

1. The geology of the south half of the Columbia quadrangle, Boone County, Missouri: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1938.

Winchell, Alexander.

1. Description of fossils from yellow sandstone lying below Burlington limestone at Burlington, Iowa (a number of species and genera described as new from Missouri): *Philadelphia Acad. Nat. Sci. Proc.*, vol. 15, pp. 2-25, 1863.
2. Descriptions of new species of fossils from Marshall group of Michigan and its supposed equivalent, in other states; with notes on some fossils of the same age previously described (Missouri species are described.): *Philadelphia Acad. Nat. Sci. Proc.*, pp. 109-134, 1865.
3. Identification of Catskill red sandstone group with Chemung (The equivalency of the Chemung, Marshall, Rockford, Burlington and Chouteau strata discussed, and that they are all Carboniferous is held.): *Am. Jour. Sci.*, 2d ser., vol. 35, pp. 61-62, 1863.
4. Marshall group; a memoir on its geological position, characters and equivalencies in the United States (References to the correlation of the Kinderhook rocks or Missouri are given.): *Am. Philosophical Soc. Proc.*, vol. 11, pp. 57-83, 1869.

Winchell, N. H. Refer to Schuchert, C., and Ulrich, E. O.

Wing, Robert Busch.

1. The igneous rock types of the eastern half of the St. Francois Mountains: Washington Univ., unpublished thesis, 61 pp., front., il., 21 figs., 4 tables, St. Louis, Missouri, 1932.

Winslow, Arthur.

1. Administrative report: *Missouri Geol. Survey Bull.* 1, pp. 1-13, Jefferson City, Missouri, 1890.
2. Notes on the coal beds of Lafayette Co., Missouri: *Missouri Geol. Survey Bull.* 1, pp. 14-21, map, Jefferson City, Missouri, 1890.
3. A preliminary report on the coal deposits of Missouri: *Missouri Geol. Survey*, 225 pp., map, Jefferson City, Missouri, 1891.
4. Geological Surveys—their relations to successful mining: *Inter-State Min. Conv. Proc.*, pp. 33-41, December, 1891.
5. The Higginsville sheet in Lafayette Co.: *Missouri Geol. Survey*, 18 pp., map, Jefferson City, Missouri, 1892; *Missouri Geol. Survey*, vol. 9, Sheet Rept. no. 1, 99 pp., geol. map, Jefferson City, Missouri, 1896.
6. The mapping of Missouri: *St. Louis Acad. Sci. Trans.*, vol. 6, pp. 57-99, map, 1892.
7. An illustration of the flexibility of limestone: *Am. Jour. Sci.*, 3d ser., vol. 43, pp. 133-134, 1892.

8. The Missouri Coal Measures and the conditions of their deposition (abstract): *Geol. Soc. America Bull.*, vol. 3, pp. 109-121, map, 1892.
9. Biennial report of the State Geologist, 1891: 53 pp., Jefferson City, Missouri, 1891; Second biennial report, 1892: 37 pp., Jefferson City, Missouri, 1893.
10. Notes on the lead and zinc deposits of the Mississippi Valley and the origin of the ores: *Jour. Geology*, vol. 1, pp. 612-619, 1893.
11. Notes on the Cambrian in Missouri and the classification of the Ozark series: *Am. Jour. Sci.*, 3d ser., vol. 45, pp. 221-226, 1893.
12. The Coal Measures of Missouri: *Mineral Resources U. S.*, 1892, pp. 429-436, 1893.
13. The Osage River and its meanders: *Science*, vol. 22, pp. 31-32, 1893.
14. Lead and zinc deposits: *Missouri Geol. Survey*, vols. 6 and 7, 763 pp., maps, Jefferson City, Missouri, 1894.
15. (and Haworth, E., and Nason, F. L.). A report on the Iron Mountain sheet, including portions of Iron, St. Francois, and Madison Cos.: *Missouri Geol. Survey*, vol. 9, Sheet Rept. no. 3, 85 pp., geological map under separate cover, Jefferson City, Missouri, 1896.
16. Geological surveys in Missouri: *Jour. Geology*, vol. 2, pp. 207-221, 1894.
17. The geologic history of Missouri: *Am. Geologist*, vol. 15, pp. 81-89, 1895.
18. Lead and zinc deposits of Missouri (with discussion by Clerc, F. L.): *Am. Inst. Min. Eng. Trans.*, vol. 24, pp. 634-689, 931-933, maps, 1895.
19. A Paleozoic eruptive in Missouri (abstract): *Am. Assoc. Adv. Sci. Proc.*, vol. 43, pp. 227-229, 1895.
20. The disseminated lead ores of southeastern Missouri: *U. S. Geol. Survey Bull.* 132, 31 pp., maps, 1896.

Wislizenus, A.

1. Memoir of a tour to northern Mexico, connected with Col. Donipán's Expedition, in 1846 and 1847. (with a scientific appendix and three maps) (This tour was commenced at St. Louis, Missouri, in 1846.): *Senate Misc. Doc.*, no. 26, 1st session, 30th Congress, Tippin & Struper, printers, Washington, 1848.

Wittich, L. L.

1. Zinc and lead in Arkansas (refers to Missouri): *Mines and Minerals*, vol. 31, pp. 10-11, 1910.
2. Barytes in Missouri: *Mines and Minerals*, vol. 33, pp. 95-97, 1912.
3. Iron mining in Missouri: *Mines and Minerals*, vol. 33, pp. 227-228, 1912.

Wolfe, M. L.

1. First annual report of the State Mine Inspector for the year ending October 15, 1885: pp. 177-295. This report is printed with the Ninth Annual Report of the Bureau of Labor Statistics, Jefferson City, Missouri, 1887.
2. Second annual report of the State Mine Inspector for the year ending October, 1888: pp. 59-125. This report is printed with the Tenth Annual Report of the Bureau of Labor Statistics, Jefferson City, Missouri, 1889.

Wood, H. B.

1. Insoluble residues of the Bonnetterre dolomite: Univ. of Missouri, unpublished thesis, Columbia, Missouri, 1938.

Wood, Mabel Vivian.

1. Geographic landscape of the northwest industrial district, metropolitan St. Louis: Washington University, unpublished thesis, 162 pp., front., 62 figs., St. Louis, Missouri, 1936.

Woodson, C. C.

1. Third annual report of the State Mine Inspector: Eleventh Annual Report of the Bureau of Labor Statistics of the State of Missouri being for the year ending November 5, 1889, pp. 447-517, Jefferson City, Missouri, 1889.
2. Fourth annual report of the State Mine Inspector of the State of Missouri for the year ending November 5, 1890: 141 pp., Jefferson City, Missouri, 1890.
3. Fifth annual report of the State Mine Inspector of the State of Missouri for the year ending June 30, 1891: 215 pp., Jefferson City, Missouri, 1891.
4. List of coal mine operators in Missouri: Rept. Missouri Geol. Survey, vol. 1, pp. 187-198, 1891.
5. Sixth annual report of the State Mine Inspector of the State of Missouri for the year ending June 30, 1892. 289 pp., Jefferson City, Missouri, 1892.

Woodward, A. E.

1. Mineral waters of Henry, St. Clair, Johnson and Benton Counties: Missouri Geol. Survey Bull. 3, pp. 85-101, 1 pl., Jefferson City, Missouri, 1890.
2. Mineral waters of Saline County: Missouri Geol. Survey Bull. 1, pp. 45-59, Jefferson City, Missouri, 1890.

Woodward, R. S.

1. Latitudes and longitudes of certain points in Missouri, Kansas, and New Mexico: U. S. Geol. Survey Bull. 49, 133 pp., 1888.

Woolford, Frederick.

1. Clays of Washington Co., Missouri: Western Journal (later Western Journal and Civilian), vol. 1, pp. 168-169, 193-195, St. Louis, Missouri, 1848.
2. Clays and minerals of Missouri: Western Jour. and Civilian, vol. 1, p. 193, 1853 (?).

3. Mineral resources of Washington County, Missouri: *Western Jour. and Civilian*, vol. 6, p. 168, 1858 (?).

Woollard, George Prior.

1. Transcontinental gravitational and magnetic profile of North America and its relation to geologic structure: *Geol. Soc. America Bull.*, vol. 54, pp. 747-790, 1943.

Workman, Lewis Edwin. Refer also to Carmody, R. A., and Ekblaw, G. E.

1. (and McQueen, H. S., and Thwaites, F. T.). Mississippi Valley cross section: *Kansas Geol. Soc. Ninth Annual Field Conference Guidebook*, pp. 362-372, 3 cross sections, August, 1935.

Worthen, Amos Henry. Refer also to Meek, F. B.; Newberry, J. S.; and St. John, O.

1. Review of some points in Dr. B. F. Shumard's report on geology of Ste. Genevieve County, Missouri (abstract): *St. Louis Acad. Sci. Trans.*, vol. 1, pp. 696-698, 1860.
- 1A. Remarks on the discovery of a terrestrial flora in the Mountain limestone of Illinois: *Am. Assoc. Adv. Sci. Proc.*, vol. 13, pp. 312-313, 1860.
2. Remarks on the Carboniferous and Cretaceous rocks of eastern Kansas and Nebraska: *Am. Jour. Sci.*, 2d ser., vol. 39, pp. 157-174, 1865.
3. Geology of Illinois . . . Sub-Carboniferous limestone (frequent references to the rocks of Missouri): *Illinois Geol. Survey*, vol. 1, pp. 40, 77, 284-292, 305-308, 1866.
4. General geology of Illinois: *Econ. Geol. Illinois*, vol. 1, pp. 79-85, 1882.
5. (and Miller, S. A.). Descriptions of fossil invertebrates (Missouri species are described): *Illinois Geol. Survey*, vol. 7, pp. 267-375, plates 27-31, 1883.
6. Descriptions of two new species of Crustacea, fifty-one species of Mollusca, and three species of Crinoids, from the Carboniferous formations of Illinois and adjacent states: *Illinois Mus. Nat. Hist. Bull.*, vol. 2, 27 pp., 1884.
7. Descriptions of fossil invertebrates: *Illinois Geol. Survey*, vol. 8, pp. 69-154, 1890.

Worthen, C. K.

1. Catalogue of American Paleozoic fossils, the collection of Prof. A. H. Worthen, deceased, late State Geologist of Illinois. Collected and purchased by him during fifty years of active life. Embracing 5,071 fine specimens, of which 752 are types, and these 240 are crinoids, etc. (The catalogue contains 81 species of Missouri specimens, and of these 73 types.): *Warsaw, Illinois*, 1889.

Wright, Joseph.

1. Geography of Rockwoods reserve: *Washington University*, unpublished thesis, 96 pp., 65 figs., St. Louis, Missouri, 1941.

Wright, Clarence A.

1. Mining and treatment of lead and zinc ores in the Joplin district, Missouri; a preliminary report: U. S. Bureau of Mines Tech. Paper 41, 44 pp., 1913.
2. Ore-dressing practice in the Joplin District: Am. Inst. Min. Eng. Trans., vol. 57, pp. 442-471, 1917.
3. (and Buehler, H. A.). Mining and Milling of lead and zinc ores in the Missouri-Kansas-Oklahoma zinc district: U. S. Bureau of Mines Bull. 154, 134 pp., 17 pls., 13 figs., 1918.

Wright, George Frederick.

1. Glacial boundary in western Pennsylvania, Ohio, Kentucky, Indiana, and Illinois (Describes the distribution of till near the glacial margin from New England to Missouri.): Am. Geologist, vol. 6, pp. 390-391, 1890; U. S. Geol. Survey Bull. 58, pp. 39-110, 1890.
2. The problem of the loess in the Missouri Valley compared with that in Europe and Asia (abstract): Science, new ser., vol. 17, pp. 227-228, 1903; Sci. Am. Suppl., vol. 55, p. 22666, 1903.
3. Another glacial wonder (boulders near Tusculumbia, Missouri): The Nation, vol. 77, pp. 461-462, 1903.
4. Evidence of the agency of water in the distribution of the loess in the Missouri Valley: Am. Geologist, vol. 33, pp. 205-222, 1904.

Wysor, D. C.

1. Diaspore clay in Arkansas and Missouri: Am. Ceramic Soc. Jour., vol. 6, no. 3, pp. 501-505, 1 fig., March, 1923.

Yandell, L. P.

1. Distribution of Crinoidea in western states (Incidental references to species in Missouri): Am. Assoc. Adv. Sci. Proc., vol. 5, pp. 229-235, 1851.

Yenne, Keith Austin.

1. The paleontology and stratigraphy of the Spergen limestone in eastern Missouri: Washington University, unpublished thesis, 89 pp., 21 figs., St. Louis, Missouri, 1939.

Young, H. I.

1. Development and underground mining practice in the Joplin District: Am. Inst. Min. Eng. Trans., vol. 57, pp. 671-681, 1917.

Young, J. M.

1. River planning in the Missouri basin: Military Eng., vol. 22, pp. 152-158, March-April, 1930.

Zeller, G. A. Refer to O'Hara, B. M.

Zieseniss, H. W. Refer to Barnard, C. R.

Zvanut, Frank Joseph.

1. Notes on Missouri halloysite: Am. Ceramic Soc. Jour., vol. 20, no. 3, pp. 84-87, 2 figs., March, 1937.

Anonymous.

1. Belcher's artesian well in St. Louis: *Am. Jour. Sci.*, 2d ser., vol. 15, pp. 460-462, 1853.
- 1A. Lead mining in southern Missouri: (From the *Western Jour.*) *De Bow's Review*, vol. 18, pp. 389-391, 1853.
- 1B. Mineral wealth of Missouri. Iron Mountain and Pilot Knob: *St. Louis Missouri*, pp. 41-42, 1854.
- 1C. Der Eisenberg am Missouri: *Die Natur*, vol. 5, p. 208, 1856.
- 1D. Missouri's rank as a mining state: *Eng. and Min. Jour.*, vol. 1, p. 42, 1866.
- 1E. Lead: *Eng. and Min. Jour.*, vol. 2, pp. 342 and 374, 1866.
- 1F. New mineral discoveries: *Western Quarterly*, vol. 1, pp. 89-90, 1868.
- 1G. Missouri iron and Indiana coal: *Eng. and Min. Jour.*, vol. 9, pp. 276 and 291, 1870.
- 1H. The New Cornwall in Missouri: *Eng. and Min. Jour.*, vol. 10, pp. 298-299, 1870.
- 1I. The mineral wealth of southwest Missouri. The lead and zinc mines of Granby, Minersville, Joplin, Grove Creek, Stevens Mines, Thurman, Cornell, Conley and others: *Joplin*, 64 pp., 1874.
2. Manganiferous iron ores (Pilot Knob): *Mines, Metals and Arts*, vol. 1, no. 6, p. 41, April 16, 1874.
3. Iron works outside of St. Louis, Iron Mountain Company, Irondale iron works, Moselle furnace, Scotia iron works, Meramec iron works, Midland blast-furnace company: *Mines, Metals and Arts*, vol. 2, pp. 243-245, October 8, 1874.
4. Another Missouri copper mine: *Mines, Metals and Arts*, vol. 3, no. 18, p. 140, July 8, 1875.
5. Where custom houses are cut out of the mountain (Account of granite quarries in Iron Co.): *Mines, Metals and Arts*, vol. 3, no. 21, pp. 162-163, July 29, 1875.
- 5A. The geological Survey of Missouri: *Am. Naturalist*, vol. 9, p. 240, 1875.
- 5B. Calamine in Missouri: *Am. Jour. Sci.*, vol. 12, p. 376, 1876.
- 5C. Cobalt in Missouri: *Am. Jour. Sci.*, vol. 12, p. 378, 1876.
- 5D. The mineral resources of Missouri: *Kansas City Rev. Sci.*, vol. 1, pp. 144-147, 1877.
- 5E. A fourth oil rock: *Kansas City Rev. Sci.*, vol. 1, p. 491, 1877.
- 5F. Missouri mineral production: *Eng. and Min. Jour.*; *Kansas City Rev. Sci.*, vol. 2, no. 2, pp. 104-106, 1878.
- 5G. Missouri steel to the Mahoning Valley; or "Coals to Newcastle": *Eng. and Min. Jour.*, vol. 40, p. 94, 1885.
- 5H. A handbook of northwest Missouri: 144 pp., 1889
- 5I. The mineral resources of Joplin, Missouri: *Eng. and Min. Jour.*, vol. 49, p. 286, 1890.
6. Pumping conditions in the Missouri-Kansas district: *The Lead and Zinc News*, vol. 9, no. 7, p. 3, Joplin, Missouri, 1905.
7. Missouri-Kansas district, new strikes, developments and progress: *The Lead and Zinc News*, vol. 9, p. 18, Joplin, Missouri, 1905.
8. Geology of the Gasconade River basin: U. S. 72d Congress, 1st session, House of Representatives Document No. 192, Letter from the Secretary of War transmitting the report of the Chief Engineer, p. 13, 1932.

9. Geology of the Grand River basin: U. S. 72d Congress, 1st session, House of Representatives Document No. 236, Letter from the Secretary of War transmitting the report of the Chief Engineer, p. 12, 1932.
10. Geology of the Osage River basin: U. S. 73d Congress, 2d session, House of Representatives Document No. 91, Letter from the Secretary of War transmitting the report of the Chief Engineer, p. 20, 1933.
11. Geology of the Missouri River basin in Missouri: U. S. 73d Congress, 2d session, House of Representatives Document No. 238, Letter from the Secretary of War transmitting the report of the Chief Engineer, pp. 75, 384-385, 1935.
- 11A. The benevolent St. Joe: *Fortune*, vol. 15, no. 6, pp. 92-99, 152, 154, June, 1937.
12. Missouri studies oil possibilities: *Oil and Gas Jour.*, vol. 37, no. 35, pp. 31-32, 2 figs., index and geol. maps, January 12, 1939.
13. Impurities of minerals of Picher District: *Eng. and Min. Jour.*, vol. 141, no. 1, p. 47, January, 1940.

SECTION II, INDEX

Contents



	Page
Counties of Missouri, their geology.....	189
Economic Geology, Mining and Metallurgy.....	208
Mineralogy.....	224
Petrology and Petrography.....	233
Stratigraphy.....	235
Paleontology.....	269
Physiography.....	278
Structural Geology.....	282
Geological maps of all parts of Missouri.....	284
Miscellaneous subjects.....	291

Counties of Missouri—Their Geology



ADAIR COUNTY.

CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 47.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Goethite: Broadhead, 77.

ANDREW COUNTY.

COAL deposits of Missouri: Hinds, 4.
OIL AND GAS in Savannah area: Greene, F. C., 5.
OIL AND GAS in Filmore area: Greene, F. C., 9.
OIL AND GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 49.
GEOLOGY of northwestern Missouri: McQueen, 12.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

ATCHISON COUNTY.

CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 30.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

AUDRAIN COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Cheltenham CLAY: Allen, V. T., 10.
Fire CLAY districts: McQueen, 15.
Pit and plant of Green Fire Brick Co.: Bradley, R. S., 1.

COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series of Missouri: Hinds, 5.

BARRY COUNTY.

GEOLOGICAL report: Rutledge, R. B., 1.
LIME and CEMENT resources: Buehler, 1.
LEAD deposits: Winslow, 14.
MINERAL WATERS OF Missouri: Schweitzer, 3.
SAND and gravel resources: Dake, 8.
ZINC deposits: Winslow, 14.
The Fortune, a Devonian formation: Grohskopf, 6.
Early Mississippian formations: Moore, R. C., 2.
Roaring River Spring: Beckman, 1.
Eureka Springs-Harrison quadrangle: Purdue, 2.
Fayetteville quadrangle: Adams, G. I., 3.

BARTON COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 42.
LIME resources: Buehler, 1.
MINERAL WATERS in Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND AND GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.
St. Louis formation in southwestern Missouri: Clark, E. L., 2.

BATES COUNTY.

CEMENT resources: Buehler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GAS pools: Greene, 4, 6, 8.
 GEOLOGICAL report: Broadhead, 44.
 GEOLOGY: Broadhead, 105.
 LIME resources: Buehler, 1.
 METEORITE found at Butler: Broadhead, 65; Farrington, 1; Smith, J. L., 1.
 OIL in Missouri: Wilson, M. E., 2.
 OIL pools: Greene, 4, 6, 8.
 QUARRYING industry: Buckley, 5.
 SAND AND GRAVEL resources: Dake, 8.
 Early Mississippian formations: Moore, R. C., 2.
 Pennsylvanian series in Missouri: Hinds, 5.

BENTON COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GEOLOGY of Calhoun sheet: Marbut, 4.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 MINERAL WATERS of Benton Co.: Woodward, A. E., 1.
 QUARRYING industry: Buckley, 5.
 ZINC deposits: Winslow, 14.
 Mines of Morgan and Benton Cos.: Broadhead, 58.
 Report on mineral lands: Broadhead, 90; Shumard, 12.
 Mastodon bones found in Benton Co.: Whipple, 1.
 Early Mississippian formations: Moore, R. C., 2.

BOLLINGER COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 KAOLIN deposits of Bollinger Co.: Orton, 1.
 LIME resources: Buehler, 1.
 QUARRYING industry: Buckley, 5.
 SAND AND GRAVEL resources: Dake, 8.
 Southeastern Missouri lowlands: Marbut, 10, 11.
 Marble Hill area: Heller, 1.

BOONE COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 COAL deposits of Missouri: Hinds, 4.

Preliminary report on COAL: Winslow, 3.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGIC section at Providence: Stewart, A., 1.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 Chalybeate spring and water supply of Columbia: Schweitzer, 1, 2.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 ROCK WOOL resources: McQueen, 11.
 SAND AND GRAVEL resources: Dake, 8.
 Devonian of Missouri: Branson, 12.
 Early Mississippian formations: Moore, R. C., 2.
 Pennsylvanian series in Missouri: Hinds, 5.
 Native silver in glacial material at Columbia: Tarr, 3.
 In Missouri (near Columbia): Von Engeln, 1.
 Columbia quadrangle: Wilson, W. P., 1.
 Four mile section along Missouri River: Branson, 4.
 Section near Columbia: Branson, 7.
 Stratigraphy of the Columbia quadrangle: Moore, G. E., 2.
 Sturgeon quadrangle: Markham, E. O., 1.

BUCHANAN COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 1.
 GAS in Gower area: Greene, F. C., 9.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Broadhead, 28.
 GEOLOGY of northwestern Missouri: McQueen, 12.
 LIME resources: Buehler, 1.
 OIL in Gower area: Greene, F. C., 9.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

BUTLER COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 GEOLOGY and bleaching CLAYS: Farrar, 2.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 Crystalline rocks of Missouri: Hawthorn, 10.

Southeastern Missouri lowlands:
Marbut, 10, 11.
Keener Spring: Beckman, 1.

CALDWELL COUNTY.

CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
Lexington COAL: Greene, 11.
The Polo GAS field: Greene, F. C., 10.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report on vicinity of Kingston: Buckley, 3.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series of Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

CALLAWAY COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Cheltenham CLAY: Allen, V. T., 10.
Fire CLAY districts: McQueen, 15.
COAL fields on western waters: Jamison, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
Bachelor quadrangle: Griggs, 1.
Calwood area: Barrett, 1.
Devonian of Missouri: Branson, 6, 12, 47.
Devonian: Greger, 7, 9, 12, 15, 17.
Fulton quadrangle: Peery, 3.
Hamilton beds: Rowley, 11.
Early Mississippian formations: Moore, R. C., 2.
Montgomery City quadrangle: Barnes, 1.
Pennsylvanian series in Missouri: Hinds, 5.
Pleistocene Mollusca: Greger, 13.
Cote Sans Dessein: Marbut, 9.
Mendozite (soda alum): Keller, 2.

CAMDEN COUNTY.

BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
IRON ores of Missouri: Crane, J. W., 1; Nason, 2; Schmidt, 1.
LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
ZINC deposits: Winslow, 14.
Macks Creek quadrangle: Hendriks, 1.
Pegmatite Hill (Decaturville): Ruhl, 2.
Spring system of the Decaturville dome: Shepard, E. M., 5.
Origin of Decaturville Dome: Tarr, 38.
Hahatonka region: Ross, B., 2; Scherer, 1; Arnold, A., 3.
Hahatonka Spring: Beckman, 1.

CAPE GIRARDEAU COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGY of parts of Cape Girardeau and Perry Cos.: Flint, 3, 4.
GEOLOGICAL report: Shumard, 13.
IRON ores of Missouri: Crane, J. W., 1.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Dutchtown, Ordovician formation: McQueen, 10.
Vertical section of Silurian strata: Shumard, 9.
Devonian of Missouri: Branson, 12.
Lowlands of southeastern Missouri: Marbut, 10, 11.
Strontium minerals: McQueen, 9.
Meteorite from Cape Girardeau: Dana, E. S., 2.

CARROLL COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of Lexington sheet: Marbut, 7.
GEOLOGY of Higginsville sheet: Winslow, 5.
GEOLOGY of Richmond quadrangle: Marbut, 8.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL springs in Missouri: Shumard, 10.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

CARTER COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGY of Eminence-Cardareva quadrangle: Bridge, 6.

IRON ores of Missouri: Crane, J. W., 1; Nason, 2.
 LIME resources: Buchler, 1.
 MANGANESE deposits: Grawe, 7.
 QUARRYING industry: Buckley, 5.
 Crystalline rocks of Missouri: Hawthorth, 10.
 Big Spring: Beckman, 1, 2.

CASS COUNTY.

CLAY deposits: Wheeler, 7.
 COAL deposits of Missouri: Hinds, 4.
 OIL and GAS possibilities of the Belton area: Wilson, M. E., 1.
 OIL and GAS in Missouri: Wilson, M. E., 2.
 OIL and GAS pools: Greene, 4, 6, 8.
 OIL and GAS resources of Cass Co.: Clair, 3.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Pennsylvanian series in Missouri: Hinds, 5.
 Archie meteorite: Haynes, 1; Nininger, 1.

CEDAR COUNTY.

CEMENT resources: Buchler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Broadhead, 40.
 LIME resources: Buchler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 Early Mississippian formations: Moore, R. C., 2.

CHARITON COUNTY.

CEMENT resources: Buchler, 1.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report on Bevier sheet: Gordon, 3.
 GEOLOGY of Huntsville quadrangle: Marbut, 6.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buchler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

CHRISTIAN COUNTY.

CEMENT resources: Buchler, 1.
 CLAY deposits: Wheeler, 7.
 GEOLOGICAL reconnaissance from Springfield to Arkansas: Schmitz, 1.
 IRON ores of Missouri: Crane, G. W., 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buchler, 1.
 QUARRYING industry: Buckley, 5.
 ZINC deposits: Winslow, 14.
 Early Mississippian formations: Moore, R. C., 2.
 Nixa area: Frossard, 1.
 Fossil wood in Reeds Spring formation: Cribbs, 1-8.
 Billings meteorite: Ward, 2.

CLARK COUNTY.

COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Shumard, 13.
 Subsurface GEOLOGY: Grohskopf, 3.
 Oil in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 Early Mississippian formations: Moore, R. C., 2.
 Pennsylvanian series in Missouri: Hinds, 5.
 Mississippi Valley area: Krey, 1.

CLAY COUNTY.

CEMENT resources: Buchler, 1.
 Lexington COAL: Greene, 11.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GAS pools: Greene, 4, 6.
 GEOLOGICAL report: Broadhead, 26.
 GEOLOGY of northwestern Missouri: McQueen, 12.
 LIME resources: Buchler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 OIL pools: Greene, 4, 6.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage patterns: Greene, 7.
 Mosby sandstone cave: Bartle, 3.

CLINTON COUNTY.

CEMENT resources: Buchler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Gower area: Greene, F. C., 9.
 GAS in Missouri: Wilson, M. E., 2.
 GAS pools: Greene, 4, 6, 8.
 GEOLOGY of northwestern Missouri: McQueen, 12.
 GEOLOGIC report on vicinity of Cameron: Buckley, 3.

- LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Gower area: Greene, F. C., 9.
 OIL in Missouri: Wilson, M. E., 2.
 OIL pools: Greene, 4, 6, 8.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.
- COLE COUNTY.**
 BARITE deposits of Missouri: Tarr, 7.
 CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GEOLOGICAL report: Broadhead, 51.
 IRON ores of Missouri: Nason, 2; Crane, G. W., 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 MINERALOGY of Cole Co.: Broadhead, 12.
 MINES: Broadhead, 59.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 ZINC deposits: Winslow, 14.
 Devonian of Missouri: Branson, 12.
- COOPER COUNTY.**
 CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GEOLOGY of Cooper Co.: Swallow, 3.
 LEAD deposits: Winslow, 14.
 LIME RESOURCES: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 QUARRYING industry: Buckley, 5.
 ROCK WOOL resources: McQueen, 11.
 ZINC deposits: Winslow, 14.
 Devonian of Missouri: Branson, 12.
 Early Mississippian formations: Moore, R. C., 2.
- CRAWFORD COUNTY.**
 CEMENT resources: Buehler, 1.
 Fire CLAY districts: McQueen, 15.
 CLAY deposits: Wheeler, 7.
 COAL deposits of Missouri: Hinds, 4.
 GEOLOGICAL report: Shumard, 13.
 GEOLOGICAL reconnaissance work: Hughes, 2.
 GEOLOGIC section Cuba to St. James: Benham, 1.
 GEOLOGY of area on Crooked Creek: Hughes, 3.
- IRON ores of Missouri: Crane, G. W., 1; Nason, 2, Schmidt, 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 ZINC deposits: Winslow, 14.
 Crystalline rocks of Missouri: Hawthorth, 10.
 Large springs: Beckman, 1.
 Stone-age man in Crawford Co.: Chapman, 1.
- DADE COUNTY.**
 CEMENT resources: Buehler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 ZINC deposits: Winslow, 14.
 Early Mississippian formations: Moore, R. C., 2.
 St. Louis formation in southwestern Missouri: Clark, E. L., 2.
- DALLAS COUNTY.**
 CEMENT resources: Buehler, 1.
 IRON ores of Missouri: Crane, G. W., 1.
 LEAD and ZINC deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 Reconnaissance work: Hughes, 2.
- DAVIESS COUNTY.**
 CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Broadhead, 50.
 GEOLOGY of northwestern Missouri: McQueen, 1.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 2.
 Pre-glacial drainage pattern: Greene, 7.
- DEKALB COUNTY.**
 CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGY of northwestern Missouri: McQueen, 12.
 LIME resources: Buehler, 1.
 OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri:
 Hinds, 5.
 Pre-glacial drainage pattern: Greene,
 7.

DENT COUNTY.

CEMENT resources: Buehler, 1.
 IRON ores of Missouri: Crane, G. W.,
 1.
 IRON ores of Missouri: Nason, 2.
 IRON ores of Missouri: Schmidt, 1.
 LIME resources: Buehler, 1.
 Montauk and other springs: Beckman,
 1, 2.

DOUGLAS COUNTY.

CEMENT resources: Buehler, 1.
 GEOLOGICAL reconnaissance work:
 Hughes, 2.
 IRON ores of Missouri: Crane, G.
 W., 1; Nason, 2.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake,
 8.
 Early Mississippian formations:
 Moore, R. C., 2.
 Large springs: Beckman, 1.

DUNKLIN COUNTY.

CEMENT resources: Buehler, 1.
 Geology and bleaching CLAYS: Far-
 rar, 2.
 Southeast Missouri CLAYS: Davis, W.
 E., 1.
 GEOLOGY and bleaching clays: Far-
 rar, 2.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake,
 8.
 Marine beds of Eocene age: Berry, 1.
 Southeastern Missouri lowlands: Mar-
 but, 10, 11.

FRANKLIN COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 IRON ores of Missouri: Crane, G. W.,
 1; Nason, 2; Schmidt, 1.
 Rueppel IRON mine: Pough, 1.
 Silver Hollow IRON Bank, Franklin
 Co.: U. S. Bureau of Mines, 2.
 LEAD deposits: Winslow, 14.
 Lost Hill and Evans LEAD mines:
 Buskett, 1.
 LIME resources: Buehler, 1.
 MINES in 1855: Litton, 1.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake,
 8.
 ZINC deposits: Winslow, 14.
 Kinderhook formations near St.
 Albans: Cozzens, 1.

Geography of the Grays Summit Sad-
 dle: Walka, 1.
 Large springs: Beckman, 1.

GASCONADE COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 LIME resources: Buehler, 1.
 Large bones found in 1838: Koch, A.
 K., 3.

GENTRY COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGY of northwestern Missouri:
 McQueen, 12.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Sch-
 weitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 Pre-glacial drainage pattern: Greene,
 7.
 Pennsylvanian series in Missouri:
 Hinds, 5.

GREENE COUNTY.

CEMENT resources: Buehler, 1.
 COAL fields: Arnold, A., 2.
 GEOLOGY of Greene Co.: Shepard,
 E. M., 9; Swallow, 21.
 GEOLOGICAL report on Greene Co.:
 Shepard, E. M., 2.
 GEOLOGICAL reconnaissance from
 Springfield to Arkansas: Schmitz,
 1.
 IRON ores of Missouri: Crane, G. W.,
 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 Pierson Creek MINES: Smith, O. M.,
 1.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake,
 8.
 Springfield WATER SUPPLY: Park,
 2.
 ZINC deposits: Winslow, 14.
 Key to rocks and geological horizons
 of Greene Co.: Shepard, E. M., 8.
 Early Mississippian formations:
 Moore, R. C., 2.
 Hannibal formation in Greene Co.:
 Park, 3.
 Winoka gravel: Hays, M., 1.
 Stylolites in Burlington-Keokuk for-
 mation at Springfield: Hayes, 1.
 Fossil wood in Reeds Spring forma-
 tion: Cribbs, 1-8.
 King-Ritter fault: Ruhl, 1.
 Cave Spring: Beckman, 1.

GRUNDY COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds,
 4.

Preliminary report on COAL: Winslow, 3.

GAS in Missouri: Wilson, 2.

Subsurface GEOLOGY: Grohskopf, 3.

LIME resources: Buehler, 1.

OIL in Missouri: Wilson, 2.

QUARRYING industry: Buckley, 5.

Pennsylvanian series in Missouri: Hinds, 5.

Pre-glacial drainage pattern: Greene, 7.

HARRISON COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGY of northwestern Missouri: McQueen, 12.

LIME resources: Buehler, 1.

OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.

Pennsylvanian series in Missouri: Hinds, 5.

Pre-glacial drainage pattern: Greene, 7.

HENRY COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

COAL deposits of Missouri: Hinds, 4.

Age of lower COALS of Henry Co.: White, C. D., 3.

Preliminary report on COAL: Winslow, 3.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGY of Clinton sheet: Marbut, 5.

GEOLOGY of Calhoun sheet: Marbut, 4.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.

LIME resources: Buehler, 1.

MINERAL WATERS of Henry Co.: Woodward, A. E., 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Early Mississippian formations: Moore, R. C., 2.

Pennsylvanian series in Missouri: Hinds, 5.

Coal floras: Round, 1.

HICKORY COUNTY.

CEMENT resources: Buehler, 1.

GAS in Missouri: Wilson, M. E., 2.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

Report on MINERAL lands: Broadhead, 90.

OIL in Missouri: Wilson, M. E., 2.

ZINC deposits: Winslow, 14.

Early Mississippian formations: Moore, R. C., 2.

HOLT COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGICAL report on Holt Co.: Broadhead, 29.

GEOLOGY of Forest City basin: McQueen, 13; Osborn, 1; Potter, P. G., 1; Lee, 3.

GEOLOGY of northwestern Missouri: McQueen, 12.

LIME resources: Buehler, 1.

OIL in Missouri: Wilson, M. E., 2.

Pennsylvanian series in Missouri: Hinds, 5.

Pre-glacial drainage pattern: Greene, 7.

HOWARD COUNTY.

CEMENT resources: Buehler, 1.

COAL measures of Howard Co.: Norwood, C. J., 4.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGICAL report: Broadhead, 45.

GEOLOGY of Huntsville quadrangle: Marbut, 6.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL in Missouri: Wilson, M. E., 2.

SAND and GRAVEL resources: Dake, 8.

Early Mississippian formations: Moore, R. C., 2.

Pennsylvanian series in Missouri: Hinds, 5.

HOWELL COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

GEOLOGICAL reconnaissance work: Hughes, 2.

IRON ores of Missouri: Crane, G. W., 1.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

Meteorite from Lanton, Howell Co.: Cullison, 2.

IRON COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

GEOLOGY of Iron Mountain sheet: Winslow, 15.

GEOLOGY of Potosi and Edgehill Quadrangles: Dake, 15.

GRANITE quarries near Graniteville: Anon., 5.

Missouri IRON, Pilot Knob: Harrison, C., 1.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.

Magnetite from IRON Mountain and Pilot Knob: Harrison, E., 1.

Pilot Knob and vicinity: Pumpelly, 2, 4.

Pilot Knob and Iron Mountain, 1874: Frazer, 1.

Description of Iron Mountain and Pilot Knob, 1852: Shepard, C. U., 3.

LIME resources: Buehler, 1.

MANGANESE deposits: Grawe, 7.

QUARRYING industry: Buckley, 5.

Archean: Haworth, 4, 5, 6, 7, 10.

Topography of Granite and porphyry region: Lonsdale, 2.

Crystalline rocks of Missouri: Haworth, 10.

JACKSON COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

COAL deposits of Missouri: Hinds, 4.

GAS pools: Greene, 4, 6, 8.

GAS resources, Jackson Co.: Blair, 2, 3.

Effective porosity in GAS fields: Bartle, 5.

Blue Springs GAS field: Bartle, 1.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGY of Jackson Co.: McCourt, 1.

GEOLOGY of Kansas City: Spotswood, 1.

GEOLOGIC section at Kansas City: Haworth, 12.

Few notes on GEOLOGY of Jackson Co.: Broadhead, 84.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL resources, Jackson Co.: Blair, 2, 3.

OIL in Missouri: Wilson, M. E., 2.

OIL pools: Greene, 4, 6, 8.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Pennsylvanian series in Missouri: Hinds, 5.

Coal Measures faunal studies: Beede, 2, 4.

Coal Measure erinoids: Beede, 3.

Species of *Hydreionocrinus* from the Coal Measures of Kansas City: Weller, S., 5.

Sandstone in the Pennsylvanian: Bartle, 2.

Cherokee formation subsurface: Bartle, 4.

Traverse of upper Des Moines and lower Missouri series from Jackson Co., Mo., to Appanoose Co., Iowa: Cline, 4.

Fossils from Kansas City and vicinity: Lykins, 1.

Paleoniscid brains case (fish): Eaton, 1.

Meteorite at Kansas City, 1878: Merrill, 4; Parker, J. D., 1.

Following the pick and spade: West, E. P., 1.

Mastodon: Ballard, 1.

Pre-glacial valley in northeast Jackson Co.: Clair, 1.

Traces of a glacier at Kansas City: Case, E. C., 1.

JASPER COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

Preliminary report on COAL: Winslow, 3.

COAL deposits of Missouri: Hinds, 4.

GEOLOGICAL report: Broadhead, 41.

GEOLOGY of the Joplin quadrangle: Siebenthal, 2.

Development of Tri-State zinc and LEAD district: Harbaugh, 1, 2.

Joplin LEAD and zinc district: Haworth, 14, 15, 16.

LEAD and zinc deposits: Winslow, 14.

LIME resources: Buehler, 1.

List of MINERALS from Joplin district: Rogers, 3, 6, 7.

MINING interests in Joplin: Beatty, 1.

Joplin MINING district: Boyd, 1; Brittain, 1, 2, 3.

MINES of Carterville: Broadhead, 108.

Crane and Chenoweth MINES: U. S. Bureau of Mines, 4.

Oronogo-Webb City-Duenweg (MINE) district: U. S. Bureau of Mines, 3, 9.

Tailings on Troupe (MINING) tract, Eggert lease: U. S. Bureau of Mines, 8.

Little Mary (MINE) tailing pile, Neck City: U. S. Bureau of Mines, 7.

ORE deposits of Tri-State district: Dake, 17; Fowler, 1-11.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Development of Tri-State ZINC and lead district: Harbaugh, 1, 2.

Joplin lead and ZINC district: Haworth, 14, 15, 16.

ZINC deposits: Winslow, 14.

Early Mississippian formations: Moore, R. C., 2.

Certification in Tri-State district: Fowler, 4, 7; Gregory, F. E., 1.

Coal Measures of Jasper Co.: Norwood, C. J., 2.

Relations of cherts to stylolites at Carthage: Bastin, 1.

Ore deposits of Tri-State District: Sales, 1.

JEFFERSON COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

GEOLOGICAL report: Shumard, 13.

GEOLOGY of Crystal City quadrangle:
Pike, R. W., 1.

IRON ores of Missouri: Crane, G. W., 1.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri:
Schweitzer, 3.

MINES in 1855: Litton, 1.

Valle MINES dumps: U. S. Bureau
of Mines, 11.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake,
8.

ZINC deposits: Winslow, 14.

House Spring area: Engel, 1.

Plattin formation: Hinchey, 1.

Early Mississippian formations:
Moore, R. C., 2.

Fossil remains: Koch, A. K., 3. (See
also other titles by same author.)

Early man: Adams, R. M., 1.

Gypsum rosettes in a cave in Jefferson
Co.: Robertson, P. 1.

JOHNSON COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

Preliminary report on COAL: Wins-
low, 3.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GAS pools: Greene, 4.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri:
Schweitzer, 3.

MINERAL WATERS of Johnson Co.:
Woodward, A. E., 1.

OIL pools: Greene, 4.

OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.

SAND and Gravel resources: Dake, 8.

Pennsylvanian series in Missouri:
Hinds, 5.

KNOX COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.

Subsurface GEOLOGY: Grohskopf, 3.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri:
Schweitzer, 3.

QUARRYING industry: Buckley, 5.

SAND and Gravel resources: Dake,
8.

Early Mississippian formations:
Moore, R. C., 2.

LACLEDE COUNTY.

CEMENT resources: Buehler, 1.

GEOLOGICAL report: Shumard, 13.

IRON ores of Missouri: Crane, G. W., 1.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri:
Schweitzer, 3.

SAND and GRAVEL resources: Dake,
8.

Bennett Spring: Beckman, 1.

LAFAYETTE COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

COAL beds of Lafayette Co.: Wins-
low, 2.

Preliminary report on COAL: Wins-
low, 3.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGY of Lexington sheet: Mar-
but, 7.

GEOLOGY of Higginsville sheet:
Winslow, 5.

LIME resources: Buehler, 1.

OIL in Missouri: Wilson, M. E., 2.

SAND and GRAVEL resources: Dake,
8.

Pennsylvanian series in Missouri:
Hinds, 5.

LAWRENCE COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

GEOLOGICAL report: Rutledge, R. B., 1.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri:
Schweitzer, 3.

Capitol MINING Co.: Lawrence Co.:
U. S. Bureau of Mines, 6.

Composition of cleaned ores produced
at Aurora: Spencer, H. G., 2.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake,
8.

ZINC deposits: Winslow, 14.

Early Mississippian formations:

Moore, R. C., 2.

Carboniferous outlier: Albertson, 1.

Occurrence of Halloysite in Lawrence
Co.: Smith, A. F., 1.

Large springs: Beckman, 1.

LEWIS COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.

Subsurface GEOLOGY: Grohskopf, 3.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri:
Schweitzer, 3.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake,
8.

Early Mississippian formations:

Moore, R. C., 2.

Mississippi Valley area: Krey, 1.

LINCOLN COUNTY.

CEMENT resources: Buehler, 1.

Fire CLAY districts: McQueen, 15.

COAL deposits of Missouri: Hinds, 4.

GEOLOGY of Lincoln Co.: Potter, W. B., 1.

GEOLOGICAL section: Grohskopf, 5.

IRON ores of Missouri: Crane, G. W., 1.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Early Mississippian formations: Moore, R. C., 2.

Auburn chert fauna: Branson, 1.

The Lincoln fold: McQueen, 13.

Mississippi Valley area: Krey, 1.

Lincoln Co. meteorite: Smith, J. L., 2.

LINN COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGICAL report: Broadhead, 48.

Subsurface GEOLOGY: Grohskopf, 3.

LIME resources: Buehler, 1.

Examination of MINERAL lands near Bucklin: Buckley, 10.

OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.

Pre-glacial drainage pattern: Greene, 7.

LIVINGSTON COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGICAL report: Broadhead, 25.

Subsurface GEOLOGY: Grohskopf, 3.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.

Pennsylvanian series in Missouri: Hinds, 5.

Pre-glacial drainage pattern: Greene, 7.

MCDONALD COUNTY.

LIME and CEMENT resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

TRIPOLI deposits at Seneca, Mo.: Nelson, 1.

American "TRIPOLI": Hovey, 2.

The TRIPOLI industry: Plumb, 1.

Fayetteville quadrangle: Adams, G. I., 3.

Jacobs Cavern: Gould, 1.

Early Mississippian formations: Moore, R. C., 2.

MACON COUNTY.

CEMENT resources: Buehler, 1.

Preliminary report on COAL: Winslow, 3.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGICAL report, Macon Co.: Broadhead, 17; McGee, 1.

GEOLOGICAL report on Bevier sheet: Gordon, 3.

Subsurface GEOLOGY: Grohskopf, 3.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL in Missouri: Wilson, M. E., 2.

The Missouri gold discovery: Reister, 1.

Gold in north Missouri: Williams, C. P., 10.

Pennsylvanian series in Missouri: Hinds, 5.

MADISON COUNTY.

CEMENT resources: Buehler, 1.

GEOLOGICAL report: Broadhead, 52.

GEOLOGY of Silver Mine area: Tolman, 2, 3.

GEOLOGY of Iron Mountain sheet: Winslow, 15.

GEOLOGY of Mine La Motte sheet: Keyes, 29.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2.

Unique LEAD deposit: Johnson, R. D. O., 1.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

MANGANESE deposits: Grawe, 7.

MINES in 1855: Litton, 1.

Remarks on MINE La Motte, 1874: Frazer, 1.

Topaz and associated minerals from Einstein silver MINE: Ross, C. S., 2.

St. Louis Smelting and Refining Co., property at Fredericktown: U. S. Bureau of Mines, 1, 10.

MINERALS of Madison Co.: Tarr, 17.

MINERAL WATERS of Missouri: Schweitzer, 3.

ZINC deposits: Winslow, 14.

Crystalline rocks of Missouri: Haworth, 10.

Igneous rocks at Skrainka: Denham, 1.

Archaeon (near Mine La Motte): Haworth, 13.

Dolomite in the Fredericktown area: McQueen, 14.

MARIES COUNTY.

CEMENT resources: Buehler, 1.
 Fire CLAY districts: McQueen, 15.
 GEOLOGICAL report: Broadhead, 13.
 IRON ores of Missouri: Crane, G. W., 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 ZINC deposits: Winslow, 14.
 Paydown Spring: Beckman, 1.

MARION COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 COAL deposit of Missouri: Hinds, 4.
 GEOLOGY of Marion Co.: Swallow, 3.
 GEOLOGIC section at Hannibal: Grohskopf, 5.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 MINERAL waters of Missouri: Schweitzer, 3.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Area near Hannibal: Bumgardner, 1.
 Early Mississippian formations: Moore, R. C., 2.
 Crinoids and blastoids from Subcarboniferous: Rowley, 9.
 Mississippian Valley area: Krey, 1.

MERCER COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

MILLER COUNTY.

BARITE deposits of Missouri: Tarr, 7.
 CEMENT resources: Buehler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 GEOLOGY of Miller Co.: Ball, S. H., 1; with introduction by Buckley, 2.
 GEOLOGIC report on Miller Co.: Meek, 20.
 IRON ores of Missouri: Crane, G. W., 1; Schmidt, 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.
 ZINC deposits: Winslow, 14.
 Glacial boulders at Tuscumbia: Wright, G. F., 3.

MISSISSIPPI COUNTY.

CEMENT resources: Buehler, 1.
 Bleaching CLAYS: Farrar, 2.
 GEOLOGY of Mississippi Co.: Farrar, 2.
 LIME resources: Buehler, 1.
 Southeastern Missouri lowlands: Marbut, 10, 11.

MONITEAU COUNTY.

BARITE deposits of Missouri: Tarr, 7.
 CEMENT resources: Buehler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 GEOLOGICAL report, introduction: Buckley, 9.
 GEOLOGICAL report on Moniteau Co.: Meek, 1; Van Horn, 1.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 ROCK WOOL resources: McQueen, 11.
 ZINC deposits: Winslow, 14.
 Resources of Moniteau Co.: Haywood, 1.
 Devonian of Missouri: Branson, 12.
 Early Mississippian formations: Moore, R. C., 2.

MONROE COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Early Mississippian formations: Moore, R. C., 2.
 Pennsylvanian series in Missouri: Hinds, 5.

MONTGOMERY COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Cheltenham CLAY: Allen, V. T., 10.
 Fire CLAY districts: McQueen, 15.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.

LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri:
 Schweitzer, 3.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake,
 8.
 Devonian of Missouri: Branson, 12.
 Area near Mineola: Clark, J. M., 1.
 Early Mississippian formations:
 Moore, R. C., 2.
 Montgomery City quadrangle: Barnes,
 1.
 Pennsylvanian cyclothems: Wanless,
 1.
 Mineola dome: Whorton, 1.

MORGAN COUNTY.

BARITE deposits of Missouri: Tarr,
 7.
 Last Chance BARITE mine: Broad-
 head, 77.
 CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Preliminary report on COAL: Wins-
 low, 3.
 COAL deposits of Missouri: Hinds, 4.
 GEOLOGY of Morgan Co.: Marbut, 15.
 GEOLOGIC report on Morgan Co.:
 Meek, 21.
 GEOLOGICAL report, introduction:
 Buckley, 14.
 IRON ores of Missouri: Crane, G. W.,
 1; Nason, 2.
 LEAD mines: Broadhead, 60.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 MINES of Morgan and Benton Cos.,
 Broadhead, 58.
 SAND and GRAVEL resources: Dake,
 8.
 ZINC deposits: Winslow, 14.
 Description of Morgan Co. in 1887:
 Arnold, A., 1.
 Large springs: Beckman, 1.

NEW MADRID COUNTY.

CEMENT resources: Buehler, 1.
 Bleaching CLAYS: Farrar, 2.
 GEOLOGY of New Madrid Co.: Far-
 rar, 2.
 LIME resources: Buehler, 1.
 New Madrid earthquake: Broadhead,
 132.
 Reports on New Madrid earthquake
 area: Fuller, 2; Lyell, 1; Macel-
 wane, 1; Macfarlane, 2; Morse, 1;
 Shepard, E. M., 7; Sampson, 5;
 Fuller, 4.
 Lowlands of southeastern Missouri:
 Marbut, 10, 11.

NEWTON COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 GEOLOGY of the Granby area:
 Buckley, 11.

GEOLOGY of the Joplin quadrangle:
 Siebenthal, 2.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 MINING and smelting at Granby:
 Perkins, 1.
 Old Granby MINES: Broadhead, 101.
 SAND and GRAVEL resources: Dake,
 8.
 ZINC deposits: Winslow, 14.
 Early Mississippian formations:
 Moore, R. C., 2.
 Big spring at Neosho: Beckman, 1.

NODAWAY COUNTY.

CEMENT resources: Buehler, 1.
 Preliminary report on COAL: Wins-
 low, 3.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Broadhead, 31.
 Geology of northwestern Missouri:
 McQueen, 12.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri:
 Schweitzer, 3.
 Oil in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake,
 2.
 Pennsylvanian series in Missouri:
 Hinds, 5.
 Pre-glacial drainage pattern: Greene,
 7.
 Fossil fish from Pennsylvanian:
 Hibbard, 1.

OREGON COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 GEOLOGICAL reconnaissance work:
 Hughes, 2.
 IRON ores of Missouri: Crane, G.
 W., 1.
 IRON ores of Missouri: Nason, 2.
 LIME resources: Buehler, 1.
 Greer and other springs: Beckman,
 1, 2.

OSAGE COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 GEOLOGICAL report: Broadhead, 14.
 IRON ores of Missouri: Crane, G.
 W., 1.
 LIME resources: Buehler, 1.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake,
 8.

OZARK COUNTY.

CEMENT resources: Buehler, 1.
 GEOLOGICAL report: Shumard, 13.
 GEOLOGICAL reconnaissance work:
 Hughes, 2.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 Large springs: Beckman, 1.

PEMISCOT COUNTY.

CEMENT resources: Buehler, 1.
 Bleaching CLAYS: Farrar, 2.
 GEOLOGY of southeast Missouri: Farrar, 2.
 LIME resources: Buehler, 1.
 Southeastern Missouri lowlands: Marbut, 10, 11.
 Wells of Pemiscot Co.: Shepard, E. M., 5.

PERRY COUNTY.

CEMENT resources: Buehler, 1.
 GEOLOGY of parts of Perry and Cape Girardeau Co.: Flint, 3, 4.
 GEOLOGICAL report: Shumard, 13.
 IRON ores of Missouri: Crane, G. W., 1.
 Grand Tower Iron works: King, 10.
 LEAD deposits: Winslow, 14.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 SAND and GRAVEL resources: Dake, 8.
 ZINC deposits: Winslow, 14.
 Dutchtown, Ordovician formation: McQueen, 10.
 Devonian of Missouri: Branson, 12.
 Early Mississippian formations: Moore, R. C., 2.
 Dickite and fluorite in Cambrian and Ordovician: Grohskopf, 2.
 Strontium minerals: McQueen, 9.
 Cote Sans Dessein (Missouri) and Grand Tower (Illinois): Marbut, 9.
 Perryville meteorite: Merrill, 3.

PETTIS COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 ROCK WOOL resources: McQueen, 11.
 Devonian of Missouri: Branson, 12.
 Early Mississippian formations: Moore, R. C., 2.
 Sub-Carboniferous series at Sedalia: Sampson, 2.
 Natural history: Sampson, 1.

PHELPS COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.

Fire CLAYS of Phelps Co.: Cronk, 1.
 COAL deposits of Missouri: Hinds, 4.
 COPPER banks of Phelps Co.: Fay, 1.

GEOLOGICAL report, 1874: Shumard, 13.

GEOLOGIC section, St. James to Cuba: Benham, 1.

GEOLOGY from Rolla to Newburg: Hughes, 1.

GEOLOGY of Rolla quadrangle: Lee, 2.

Topography and GEOLOGY of Panther Bluffs: Maveety, 1.

GEOLOGY of Beaver quadrangle, Phelps Co.: Paulette, 1.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.

IRON banks of Phelps Co.: Fay, 1.

IRON ores at Buckland's Bank: Garvans, 1.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

Phelps Co., ORES: Price, 1.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Rolla WATER supply: Anderson, 1.

Revision of Jefferson City formation in Rolla quadrangle: Cullison, 1.

Sandstone member of Jefferson City and Cotter formations: Grawe, 3.

Roubidoux near Rolla: Schultzy, J. E., 1.

Faunas of residual Mississippian: Bridge, 2.

Basal Cherokee in Rolla area: Murphy, 1.

Newburg district: Lee, 1.

Ankerite from Phelps Co.: Rogers, 1.

Salt peter cave, map and geology: Detweiler, 1.

Power utilization at Meramec Spring: Walsh, 1.

Meteorite fall at Little Piney (Arlington) 1839: Herrick, E. C., 1.

Analysis of Little Piney meteorite (Arlington): Shepard, 2.

Meramec and other large springs: Beckman, 1, 2.

PIKE COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Fire CLAY districts: McQueen, 15.
 COAL deposits of Missouri: Hinds, 4.
 GEOLOGICAL report, introduction: Buckley, 15.
 GEOLOGICAL cross section: Grohskopf, 5.
 Subsurface GEOLOGY: Grohskopf, 3.
 GEOLOGY of Pike Co.: Rowley, 24.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.

QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Trenton limestone and Hudson River shales of Pike Co.: Rowley, 6.
 Inarticulate brachiopods from Grassy Creek shale: Greger, 24.
 Edgewood limestone: Rowley, 25.
 Early Mississippian formations: Moore, R. C., 2.
 Keokuk limestone and Coal Measures of Pike Co.: Rowley, 5.
 Fossil collecting in Burlington limestone: Rowley, 7.
 Echinodermata from Sub-carboniferous: Rowley, 8.
 Vertical range of fossils at Louisiana (Mo.): Rowley, 15.
 Fauna of Burlington limestone at Louisiana: Rowley, 18.
 Fossils at Louisiana, Missouri: Keys, 34.
 The Lincoln fold: McQueen, 13.

PLATTE COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GAS pools: Greene, 4, 8.
 GEOLOGICAL report: Broadhead, 27.
 GEOLOGY of northwestern Missouri: McQueen, 12.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL pools: Greene, 4, 8.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

POLK COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Physical GEOLOGY of an area near Humansville: Rhodes, 1.
 IRON ores of Missouri: Crane, G. W., 1.
 LIME resources: Buehler, 1.
 Early Mississippian formations: Moore, R. C., 2.

PULASKI COUNTY.

CEMENT resources: Buehler, 1.
 Fire CLAY districts: McQueen, 15.
 GEOLOGICAL report: Shumard, 13.
 IRON ores of Missouri: Crane, G. W., 1.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 Onyx deposits of Boiling Springs Cave: Stauber, 1.
 Large springs: Beckman, 1.

PUTNAM COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report on Putnam Co.: Norwood, C. J., 5.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

ROLLS COUNTY.

CEMENT resources: Buehler, 1.
 Fire CLAY districts: McQueen, 15.
 CLAY and COAL in the Perry area: McQueen, 3.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Early Mississippian formations: Moore, R. C., 2.
 Mississippi Valley area: Krey, 1.
 The Lincoln fold: McQueen, 13.
 Cross section: Grohskopf, 5.

RANDOLPH COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Broadhead, 18.
 GEOLOGICAL report on Bevier sheet: Gordon, 3.
 GEOLOGY of Huntsville quadrangle: Marbut, 6.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 MINERAL WATERS of Missouri: Schweitzer, 3.
 OIL in Missouri: Wilson, M. E., 2.
 Pennsylvanian series in Missouri: Hinds, 5.

RAY COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 Lexington COAL: Greene, 11.

GAS pools: Greene, 4.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGY of Lexington sheet: Marbut, 7.
 GEOLOGY of Richmond quadrangle: Marbut, 8.
 GEOLOGY of northwestern Missouri: McQueen, 12.
 LIME resources: Buehler, 1.
 OIL pools: Greene, 4.
 OIL in Missouri: Wilson, M. E., 2.
 OIL springs in Missouri: Shumard, 10.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

REYNOLDS COUNTY.

CEMENT resources: Buehler, 1.
 GEOLOGY of Eminence-Cardareva quadrangle: Bridge, 6.
 GEOLOGY of Potosi and Edgehill quadrangle: Dake, 15.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LIME resources: Buehler, 1.
 MANGANESE deposits: Grawe, 7.
 Geographical notes: Broadhead, 70.
 Crystalline rocks of Missouri: Hawthorth, 10.
 Large springs: Beckman, 1.

RIPLEY COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 IRON ores of Missouri: Crane, G. W., 1.
 IRON ores of Missouri: Nason, 2.
 LIME resources: Buehler, 1.
 MANGANESE deposits: Grawe, 7.

ST. CHARLES COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 COAL deposits of Missouri: Hinds, 4.
 LIME resources: Buehler, 1.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Early Mississippian formations: Moore, R. C., 2.
 The loess near St. Louis: Robertson, P., 2.
 Mississippi Valley area: Krey, 1.

ST. CLAIR COUNTY.

CEMENT resources: Buehler, 1.
 Preliminary report on COAL: Winslow, 3.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.
 LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.
 MINERAL waters of St. Clair Co.: Woodward, A. E., 1.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 Early Mississippian formations: Moore, R. C., 2.

ST. FRANCOIS COUNTY.

BARITE deposits of Missouri: Tarr, 7.
 CEMENT resources: Buehler, 1.
 GEOLOGY of Iron Mountain: Winslow, 15.
 GEOLOGY of Mine LaMotte sheet: Keyes, 29.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LEAD deposits: Winslow, 14.
 Disseminated LEAD deposits: Buckley, 22.
 Southeast Missouri LEAD district: Broadhead, 74.
 LIME resources: Buehler, 1.
 Mines in 1855: Litton, 1.
 Valley MINE dumps: U. S. Bureau of Mines, 11.
 QUARRYING industry: Buckley, 5.
 ZINC deposits: Winslow, 14.
 Crystalline rocks of Missouri: Hawthorth, 10.
 Prismatic sandstone near Knob Lick: Haworth, 11.
 Cambrian fossils: Beecher, 1.

STE. GENEVIEVE COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 Ste. Genevieve Co. COPPER mine: Gage, 5.
 Ste. Genevieve COPPER deposit: Nicholson, 1.
 Cornwall mines and primary COPPER: Rust, 1.
 Another Missouri Copper mine: Anon., 4.
 GEOLOGY of Ste. Genevieve Co.: Weller, S., 27.
 GEOLOGY of Weingarten quadrangle: Bodman, 1.
 GEOLOGY of Mine LaMotte sheet: Keyes, 29.
 Igneous GEOLOGY of Ste. Genevieve Co.: Kidwell, 1.
 GEOLOGY of Ste. Genevieve Co.: 1859: Shumard, 6.
 GEOLOGICAL report, 1875: Shumard, 13.
 IRON ores of Missouri: Crane, G. W., 1.
 LEAD deposits: Winslow, 14.
 LEAD ores from Ste. Genevieve Co., 1814: Meade, 1.
 LIME resources: Buehler, 1.

Alnoite pipes, contact phenomena and ORE deposition near Avon: Singewald, 3.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

ZINC deposits: Winslow, 14.

Crystalline rocks of Missouri: Hawthorth, 10.

Stratigraphy and larger fossils of Plattin formation: Fenton, 2.

Devonian of Missouri: Branson, 12.

Early Mississippian formations: Moore, R. C., 2.

Ozora district: Bailey, L., 1.

Review of Shumard's report: Worthen, A. H., 1.

Possible "pre-historic" man in southeastern Missouri: Croneis, 3.

Ste. Genevieve meteorite: Ward, 1.

ST. LOUIS, CITY and COUNTY.

CEMENT resources: Buchler, 1.

CLAY deposits: Wheeler, 7.

CLAY resources of St. Louis area: Fenneman, 1.

Cheltenham CLAY: Allen, V. T., 10.

COAL deposits of Missouri: Hinds, 4.

Occurrence of GAS about St. Louis: Wheeler, 11.

GEOLOGY and resources of St. Louis quadrangle: Fenneman, 3, 4.

GEOLOGIC section along Mississippi River: Foster, V. M., 1.

GEOLOGIC section, Dupo, Ill., to Hannibal, Mo.: Grohskopf, 5.

GEOLOGY of part of St. Louis Co.: Tompson, J. P., 1.

Structural GEOLOGY of parts of St. Louis: Stringfield, 1.

Subsurface GEOLOGY of East St. Louis region: Ekblaw, 1.

LIME resources: Buchler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

MINERAL resources of St. Louis district: Cuno, 1.

MINERALS in St. Louis: Magness, 1.

MINERAL notes, aerinite from St. Louis Co.: Robertson, P., 5.

MINERAL notes, barite from St. Louis: Koenig, 1.

MINERAL notes, dickite in St. Louis: Allen, V. T., 8.

MINERAL notes, mendozite (soda alum): Keller, 2.

MINERAL notes, millerite in St. Louis: Leonhard, 2.

Occurrence of OIL about St. Louis: Wheeler, 11.

PHYSIOGRAPHY of St. Louis area: Fenneman, 3.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Underground WATERS in St. Louis: Gleason, 2.

Plattin limestone: Hinchey, 1.

Early Mississippian formations: Moore, R. C., 2.

Mississippian exposure in St. Louis Co. Shipton, 1.

Mississippian chert: Barton, 1.

Breccia from the St. Louis formation: Grawe, 2.

St. Louis formation: Hinchey, 2.

Ste. Genevieve outlier in St. Louis: Gollhoffer, 1.

Carboniferous rock of St. Louis: Engelmann, 1.

Pennsylvanian outlier: Knight, 3.

Petrology of Pennsylvanian cycles: Frank, A. J., 1.

Septaria from Pennsylvanian shales: Grawe, 1.

Drift in St. Louis and vicinity: Drushell, 1, 2; Robertson, P., 3; Wheeler, 4.

Loess in vicinity of St. Louis: Nason, 1; Robertson, P., 2.

Stratigraphic work near East St. Louis: Fenneman, 2.

Structure of earth's crust east and north of St. Louis: Berkenhauer, 2.

Well at Insane Asylum: Broadhead, 64; Phillips, J. V., 2.

Belcher's artesian well: Litton, 2; Prout, 5; Anon., 1.

Bed rock topography: Thatcher, 1.

Meramecian Blastoides: Greger, 30.

Ecological cross section of Mississippi River at St. Louis: Hies, 1.

General resources 1882: Bliss, 1.

Height of the St. Louis directrix: Broadhead, 66.

SALINE COUNTY.

CEMENT resources: Buchler, 1.

CLAY deposits: Wheeler, 7.

COAL deposits of Missouri: Hinds, 4.

Preliminary report on COAL: Winslow, 3.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGIC report on Saline Co.: Meek, 23.

LEAD deposits: Winslow, 14.

LIME resources: Buchler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

MINERAL WATERS of Saline Co.: Woodward, A. E., 2.

OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

ZINC deposits: Winslow, 14.

Ordovician outcrop in Saline Co.: Grohskopf, 4.

Early Mississippian formations: Moore, R. C., 2.

Pennsylvanian series in Missouri: Hinds, 5.

SCHUYLER COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GAS in Missouri: Wilson M. E., 2.
 GEOLOGICAL report on Schuyler Co.: Norwood, C. J., 5.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 OIL in Missouri: Wilson, M. E., 2.
 Pennsylvanian series in Missouri: Hinds, 5.

SCOTLAND COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 GAS in Missouri: Wilson, M. E., 2.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 OIL in Missouri: Wilson, M. E., 2.
 Early Mississippian formations: Moore, R. C., 2.
 Pennsylvanian series in Missouri: Hinds, 5.

SCOTT COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7; Davis, W. E., 1.
 GEOLOGY and bleaching CLAYS: Farrar, 2.
 LIME resources: Buehler, 1.
 QUARRYING industry: Buckley, 5.
 SAND and GRAVEL resources: Dake, 8.
 Dutchtown, Ordovician formation: McQueen, 10.
 Marine beds of Eocene age: Berry, 1.
 Folded structure near Commerce: Stewart, D. R., 2.
 Southeastern Missouri lowlands: Marbut, 10, 11.

SHANNON COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.
 COPPER deposits: Bowles, 1; Grea-son, 1.
 GEOLOGY of Eminence-Cardareva quadrangle: Bridge, 6.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LIME resources: Buehler, 1.
 MANGANESE deposits: Grawe, 7.
 QUARRYING industry: Buckley, 5.
 Crystalline rocks of Missouri: Haworth, 10.
 Alley, Welsh and other large springs: Beckman, 1, 2.
 Ebb and Flow Spring: Bridge, 4.

SHELBY COUNTY.

CEMENT resources: Buehler, 1.
 CLAY deposits: Wheeler, 7.

Fire CLAY districts: McQueen, 15.
 COAL repositis of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GEOLOGICAL report: Broadhead, 16.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 Early Mississippian formations: Moore, R. C., 2.

STODDARD COUNTY.

CEMENT resources: Buehler, 1.
 BAUXITIC CLAY: Stewart, 1.
 Geology and bleaching CLAYS: Farrar, 2.
 CLAY deposits: Wheeler, 7; Davis, W. E., 1.
 GEOLOGY of Stoddard Co.: Farrar, 3.
 GEOLOGY of Crowley's Ridge: Branner, 1.
 IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
 LIME resources: Buehler, 1.
 SAND and GRAVEL resources: Dake, 8.
 Marine beds of Eocene age: Berry, 1.
 Lowlands of southeastern Missouri: Marbut, 10, 11.

STONE COUNTY.

CEMENT resources: Buehler, 1.
 Galena-Joplin LEAD district: Haworth, 14-16.
 LIME resources: Buehler, 1.
 Galena-Joplin ZINC district: Haworth, 14-16.
 Early Mississippian formations: Moore, R. C., 2.
 Fossil wood in Reeds Spring formation: Cribbs, 1-8.
 The Baxter meteorite: Nininger, 2, 3.
 Eureka Springs-Harrison quadrangle: Purdue, 2.

SULLIVAN COUNTY.

CEMENT resources: Buehler, 1.
 COAL deposits of Missouri: Hinds, 4.
 Preliminary report on COAL: Winslow, 3.
 GAS in Missouri: Wilson, M. E., 2.
 GEOLOGICAL report: Broadhead, 46.
 Subsurface GEOLOGY: Grohskopf, 3.
 LIME resources: Buehler, 1.
 OIL in Missouri: Wilson, M. E., 2.
 QUARRYING industry: Buckley, 5.
 Pennsylvanian series in Missouri: Hinds, 5.
 Pre-glacial drainage pattern: Greene, 7.

TANEY COUNTY.

CEMENT resources: Buehler, 1.
 Reconnaissance GEOLOGY work: Hughes, 2.

GEOLOGICAL reconnaissance from Springfield to Arkansas: Schmitz, 1.

IRON ores of Missouri: Crane, G. W., 1.

LIME resources: Buehler, 1.

Early Mississippian formations: Moore, R. C., 2.

Marble Cave (Since known as Marvel Cave): Emery, 1.

Mincy meteorite: Farrington, 1; Kunz, 1; Shepard, C. U., 4.

Eureka Springs-Harrison quadrangle: Purdue, 2.

TEXAS COUNTY.

CEMENT resources: Buehler, 1.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

ZINC deposits: Winslow, 14.

Large springs: Beckman, 1.

VERNON COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

Preliminary report on COAL: Winslow, 3.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Greene, 4; Wilson, M. E., 2.

GEOLOGICAL report: Broadhead, 43; Greene, F. C., 3; Norwood, C. J., 3.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL in Missouri: Greene, 4; Wilson, M. E., 2.

SAND and GRAVEL resources: Dake, 8.

Early Mississippian formations: Moore, R. C., 2.

Pennsylvanian series in Missouri: Hinds, 5.

Early history and exploration of Vernon Co.: Shepard, E. M., 10.

WARREN COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

Fire CLAY districts: McQueen, 15.

COAL deposits of Missouri: Hinds, 4.

GEOLOGICAL report: Broadhead, 15.

IRON ores of Missouri: Crane, G. W., 1.

LIME resources: Buehler, 1.

SAND and GRAVEL resources: Dake, 8.

Devonian of Missouri: Branson, 12.

Gore Area: Stephens, 1.

Early Mississippian formations: Moore, R. C., 2.

Warrenton meteorite: Broadhead, 80; Farrington, 1; Smith, J. L., 1.

WASHINGTON COUNTY.

Geology, mining and preparation of BARITE in Washington Co.: Steel, 1.

BARITE deposits of Missouri: Tarr, 7.

CEMENT resources: Buehler, 1.

CLAYS of Washington Co., 1848: Woolford, 1.

GEOLOGY of Potosi and Edgehill quadrangles: Dake, 15.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2.

Disseminated LEAD deposits: Buckley, 22.

LEAD mines: Ball, S. H., 3.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

MINERAL resources of Washington Co., 1858: Woodford, 3.

MINES in 1855: Litton, 1.

Crystalline rocks of Missouri: Hawthorth, 10.

WAYNE COUNTY.

CEMENT resources: Buehler, 1.

CLAY deposits: Wheeler, 7.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2.

LIME resources: Buehler, 1.

QUARRYING industry: Buckley, 5.

SAND and GRAVEL resources: Dake, 8.

Southeastern Missouri lowlands: Marbut, 10, 11.

Large springs: Beckman, 1.

WEBSTER COUNTY.

CEMENT resources: Buehler, 1.

GEOLOGY of Greene Co., contains references to Webster Co.: Shepard, E. M., 9.

LEAD deposits: Winslow, 14.

LIME resources: Buehler, 1.

Underground WATER: Shepard, E. M., 6.

ZINC deposits: Winslow, 14.

Early Mississippian formations: Moore, R. C., 2.

WORTH COUNTY.

CEMENT resources: Buehler, 1.

COAL deposits of Missouri: Hinds, 4.

GAS in Missouri: Wilson, M. E., 2.

GEOLOGY of northwestern Missouri: McQueen, 12.

LIME resources: Buehler, 1.

MINERAL WATERS of Missouri: Schweitzer, 3.

OIL in Missouri: Wilson, M. E., 2.

Pennsylvanian series in Missouri:
Hinds, 5.
Pre-glacial drainage pattern: Greene,
7.

WRIGHT COUNTY.

CEMENT resources: Buehler, 1.
GEOLOGICAL report: Shumard, 13.

LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake,
8.
ZINC deposits: Winslow, 14.
Early Mississippian formations:
Moore, R. C., 2.

Economic Geology, Mining and Metallurgy



ASPHALT. Refer also to BITUMEN.

- Quarry and plant of Reliance Rock Asphalt Co.: Crabtree, 1.
- Sand and gravel resources of Missouri: Dake, 8.
- Asphalt and bituminous rock deposits of the United States: Eldridge, 1.
- Geology of Vernon Co.: Greene, F. C., 3.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

BARITE.

- Geology of Miller Co.: Ball, S. H., 1.
- Mines of Morgan and Benton Cos.: Broadhead, 58.
- Last Chance mine, Morgan Co.: Broadhead, 77.
- Mineral lands: Broadhead, 90.
- Barytes industry of Cole Co.: Bryant, F. C., 1.
- Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
- Story of Barites: Clark, A. W., 1.
- Technical problems of barytes industries: Comins, 1.
- Gopher-hole barite mining in Washington Co.: Cozzens, 5.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Barite mining in southern Missouri: Hopson, 1.
- Geology of the Rolla Quadrangle: Lee, W., 2.
- Geology of Morgan Co.: Marbut, 15.
- Barite production in 1923: Siebenthal, 29.
- Geology, mining and preparation of barite in Washington Co.: Steel, 1.
- Barite deposits: Tarr, 6, 7, 11.
- Barite vein cutting granite: Tarr, 29.
- Barite industry of Missouri: Weigel, W. M., 1.
- Barytes in Missouri: Wittich, 2.
- Mineral resources of Washington Co., 1858: Woodford, 2.

BITUMEN. Refer also to ASPHALT.

- Occurrence of bitumen in Missouri: Broadhead, 68.
- Bitumen, asphaltum, petroleum pyro-schists: Broadhead, 79.

Bitumen and asphalt rocks: Broadhead, 135.

Bitumen and oil rocks: Broadhead, 136.

Bituminous sandstone area of south-west Missouri: Hall, C. W., 1.

BITUMINOUS SHALES.

Bituminous shales: Broadhead, 75.

BUILDING STONE. Refer to STONE.

CEMENT, PORTLAND.

- Geology of Miller Co.: Ball, S. H., 1.
- Lime and cement resources: Buehler, 1.
- Manufacture of Portland cement: Butler, 1.
- Take chert from limestone at Universal Atlas plant: Diener, 1.
- Cement materials and industry of the United States: Eckel, 1, 2.
- Geology of the St. Louis Quadrangle: Fenneman, 4.
- Geology of Jackson Co.: McCourt, 1.
- Geology of Pike Co.: Rowley, 24.
- Geology of Moniteau Co.: Van Horn, F. B., 1.

CERAMICS. Refer to CLAY.

CHAT.

- Joplin district folio: Smith, W. S. T., 2A.
- Technical problems of the tripoli, chat, and ground limestone industries: Reynolds, 1.

CHEMICAL RESOURCES.

- Chemical and mineral resources of the St. Louis industrial district: Cuno, 1.

CLAY.

Bleaching.

- Geology and bleaching clay of south-west Missouri: Farrar, 2.

Diaspore.

- Mineral composition and origin: Allen, V. T., 5.
- Winning of Missouri clays: Forbes, 1, 2.

- Mining diaspore and flint clays: McQueen, 1.
 Geologic relations of diaspore and flint clays: McQueen, 4.
 The diaspore clays of Missouri: Swartzlow, 2.
 Diasporite in Missouri, 1917: Wherry, 1.
 Diaspore clay of Missouri: Wysor, 1.

Fire.

- Cheltenham clay: Allen, V. T., 7, 10.
 Pit of Green Fire Brick Co.: Bradley, R. S., 1.
 Prospecting and developing semi-plastic fire clays: Bradley, R. S., 2.
 Fire clays of Phelps Co.: Cronk, 1.
 Prospecting, developing and mining semi-plastic fire clay in Missouri: Bradley, R. S., 1.
 Yearbook of manufacture in St. Louis: Howe, 1.
 Fire clay of east central Missouri: McQueen, 16.
 Refractory clays of Missouri: Moore, G. E., 1.
 Tests on Missouri fire clays: Taylor, H. W., 1.
 Fire clays of Missouri: Wheeler, 10.

Flint.

- Mineral composition and origin of flint clay: Allen, V. T., 5.
 Winning of Missouri clays: Forbes, 1.
 Sandstone covered flint clay: Keller, 5.
 Mining diaspore and flint clays: McQueen, 1.
 Geologic relations of diaspore and flint clays: McQueen, 4.

General.

- Geology of Miller Co.: Ball, S. H., 1.
 Paints and clays: Broadhead, 5.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Further investigations of southeastern Missouri clays: Davis, W. E., 1.
 Geology of Stoddard Co.: Farrar, W., 3.
 Clay resources of St. Louis district: Fenneman, 1.
 Ceramic engineering: Freeman, 1.
 Technical problems in ceramics: Greaves-Walker, 1.
 Popular review of ceramic history: Haberman, 1.
 Story of Ceramics: Haberman, 2, 3.
 Geological occurrence of clays: Keyes, 19.
 Distribution and character of Missouri clays: Keyes, 35.
 Clays, etc.: Ladd, 1-4.
 Geology of the Rolla Quadrangle: Lee, W., 2.
 Geology of Jackson Co.: McCourt, 1.

- Clay resources of Perry area: McQueen, 3.
 Fire clay districts in east central Missouri: McQueen, 16.
 Geology of the Calhoun Sheet: Marbut, 4.
 Geology of the Clinton Sheet: Marbut, 5.
 Geology of the Lexington Sheet: Marbut, 7.
 Geology of the Richmond area: Marbut, 8.
 Geology of Morgan Co.: Marbut, 15.
 Kaolin deposits of Bollinger Co.: Orton, 1.
 The clay-working industry in 1896: Ries, 1.
 High-grade clays of the eastern United States, with notes on some western clays: Ries, H., 2.
 Geology of Pike Co.: Rowley, 24.
 Zinciferous clays of southwest Missouri: Seamon, 1.
 Clays of Missouri: Shepard, E. M., 1.
 Geology of Greene Co.: Shepard, E. M., 2.
 Occurrence of bauxitic clay in Stoddard Co.: Stewart, D. R., 1.
 Treatise on Missouri clays: Thornberry, 1.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Clays and shales: Wheeler, 3.
 Clay deposits and resources: Wheeler, 7, 8.
 Clays of Washington Co.: Woolford, 1.
 Clay and minerals of Missouri: Woolford, 2.

Tallow.

- Geology of the Granby area: Buckley, 11.
 Miscellaneous analyses, tallow clays: Clark, F. W., 1.
 Tallow clays of southwestern Missouri: Seamon, 2.

*COAL.**Analyses and Tests.*

- Analyses of fuels: Blair, 2.
 Boiler tests: Breckenridge, 1, 2.
 Steaming tests: Breckenridge, 3, 4.
 Analyses of Missouri coal: Campbell, M. R., 1-5.
 Analyses of Missouri fuels: Chauvenet, R., 1, 2.
 Washing tests on Missouri coals: Delameter, 1, 2.
 Producer-gas tests on Missouri coals: Fernald, 1-4.
 Analyses of Missouri coals: Fieldner, 1.
 Coal deposits of Missouri: Hinds, 4.
 Analyses of Missouri coals: Lord, 1-5.
 Briquetting tests on Missouri coal: Malcomson, 1.

Heating value and proximate analyses of Missouri coals: Marx, 1.
 Field work on Missouri coal for fuel tests: Parker, E. W., 19.
 Briquetting tests on Missouri coal: Pratt, 1, 2.
 Coal analysis: Schweitzer, 2.
 Firing tests on Missouri coal: Sharp, 1.
 Analyses of Missouri coals: Snyder, 1.
 Coking tests of Missouri coal: Stammer, 1, 2.
 Washing tests on Missouri coal: Wick, 1, 2.

Coal Fields and Deposits.

Cannel coal in the United States: Ashley, 1.
 Coal fields near Springfield: Arnold, A., 2.
 Geology of Miller Co.: Ball, S. H., 1.
 Mystic coal basin (North Missouri): Bain, 1, 2.
 Western interior coal fields: Bain, 7.
 Area and topographic features: Broadhead, 19.
 Economic geology of the Coal Measures: Broadhead, 23.
 Southwest coal fields: Broadhead, 39, 54, 76.
 Coal deposits of southwest Missouri: Broadhead, 117.
 Curious deposits: Brodie, 1.
 Coal fields of Missouri: Bush, 1.
 Illinois and Missouri coal fields: Cady, 1.
 Technical problems of coal industry: Cheasley, 1.
 Missouri coal: Cobb, H., 1.
 Geography and detailed stratigraphy of the Kansas Coal Measures: Crane, W. R., 1.
 Missouri cannel coals: Dunlap, 2.
 Mineral content of Bevier coal seam: Gallaher, R. T., 1.
 Mining thin coal seams in Missouri: Gluck, 1.
 Report on the Bevier Sheet: Gordon, C. H., 3.
 Coal resources in northeastern Missouri: Greene, F. C., 1.
 Geology of Vernon Co.: Greene, F. C., 3.
 Lexington coal in northwestern Missouri: Greene, F. C., 11.
 Coal fields in Morgan Co.: Griffith, 1.
 Coal fields in Cherokee Co., Kansas: Haworth, 2.
 Coal fields of Iowa: Hinds, 1, 2.
 Coal fields of Missouri: Hinds, 3, 4.
 Leavenworth-Smithville Folio (Missouri-Kansas): Hinds, 6.
 Coal fields on western waters, 1852: Jameson, 1.

Coal available for stream navigation: Johnson, W. R., 1.
 Structure of coal deposits: Keyes, 37.
 Coal regions of America: Macfarlane, 1.
 Geology of Jackson Co.: McCourt, 1.
 Coal resources of Perry area: McQueen, 3.
 Geology of the Calhoun Sheet: Marbut, 4.
 Geology of the Clinton Sheet: Marbut, 5.
 Geology of the Huntsville Quadrangle: Marbut, 6.
 Geology of the Lexington Sheet: Marbut, 7.
 Geology of the Richmond Quadrangle: Marbut, 8.
 Geology of Morgan County: Marbut, 15.
 Kansas and Missouri coals: Place, 1.
 Report on Lincoln Co. coal fields: Potter, W. B., 1.
 Coal of United States: Prime, 1.
 Coal mining methods in Randolph Co.: Rutledge, J. J., 1.
 Joplin District Folio: Smith, W. S. T., 2A.
 Topography and Geology of coal areas: Thom, W. T., 1.
 Rosedale gas and coal wells: Thorne, 2.
 Longwall mining methods in middle Western States: Toenges, 1.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Coal mining methods of Missouri: Weigel, W. W., 1.
 Coal resources of Missouri, 1882-84: Williams, A., Jr., 1, 2.
 Origin of clay slips: Wilson, W. B., 1, 2.
 Coal beds of Lafayette Co.: Winslow, 2.
 Coal deposits of Missouri: Winslow, 3.
 Report on the Higginsville Sheet: Winslow, 5.
 List of coal mine operators in Missouri, 1891: Woodson, 4.

Production. Refer also to MINE INSPECTION or to either the *Minerals Year Book* by the U. S. Bureau of Mines; or *Mineral Industry*, an annual edited by Roush, G. R., and published by McGraw Hill Publishing Co., New York.

Statistics on coal, 1848: Taylor, R. C., 1.
 Coal production, 1883-84: Armstrong, 1.
 Coal production, 1885-1888: Ashburner, 1, 2, 4, 5.
 Coal production, 1889-1912: Parker, 1-18, 20-24.

COKE.

- Coking test of Missouri coal: Belden, 1, 2.
 Carbonization of Missouri cannel coals: Dunlap, 1.
 Cupola tests on coke made from Missouri coal: Moldenke, 1, 2.

COBALT.

- Report on Mine La Motte Sheet: Keyes, 29.
 Minerals of Madison Co.: Tarr, 17.
 Cobalt-nickel-copper-lead deposits of Fredericktown: Tarr, 18.
 Cobalt - nickel - iron - copper sulfides: Tarr, 36.
 St. Louis Smelting and Refining Company, property at Fredericktown, Madison Co.: U. S. Bureau of Mines, 1, 10.
 Missouri cobalt resources 1883-84: Williams, A., Jr., 2.

COPPER.

- Southeast Missouri copper deposits: Bain, 11, 13.
 Shannon Co. copper: Bowles, 1.
 Geology of Eminence-Cardareva Quadrangles: Bridge, 6.
 Copper prospects, 1859: Broadhead, 1.
 Missouri copper mines. Case, T. S., 3.
 Reed, Simpson and Kelly copper and iron banks of Phelps Co.: Fay, 1.
 Ste. Genevieve Co. copper mines: Gage, 5.
 Copper deposits of Shannon Co.: Greason, 1.
 Report on Mine La Motte Sheet: Keyes, 29.
 Report on River, Hinch, Bleeding Hill and Blanton copper mines: King, 8.
 Ste. Genevieve copper deposits: Nicholson, 1.
 Colloidal primary copper at Cornwall mines: Rust, 1.
 Copper in central states: Siebenthal, 6.
 Minerals of Madison Co.: Tarr, 17.
 Cobalt-nickel-copper-lead deposits of Fredericktown: Tarr, 18.
 Cobalt - nickel - iron - copper sulfides: Tarr, 36.
 St. Louis Smelting and Refining Company, property at Fredericktown, Madison Co.: U. S. Bureau of Mines, 1, 10.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Copper resources of Missouri, 1882-84: Williams, A., Jr., 1, 2.
 Analyses of copper ores: Williams, C. P., 7, 9.
 Another Missouri copper mine: Anon., 4.

DRAINAGE OF MINES.

- A geological drainage problem: Heap, 1.
 Mine drainage, southeast Missouri lead district: Weigel, W. W., 3.

ECONOMIC GEOLOGY, GENERAL. Refer also to REPORTS OF STATE GEOLOGIST under MISCELLANEOUS SUBJECTS and to ORIGIN OF ORES.

- Collection of economic geology and metals in U. S. National Museum: Dewey, 1.
 Structural and economic geology of Missouri: Gallaher, 2.
 Useful minerals of the United States: Sanford, 1; Schrader, 1.

FERTILIZERS.

- Mineral fertilizer of Mississippi Valley: Dodge, 1.
 Nitrate deposits of the United States: Mansfield, 1.

FUEL. Refer to COAL, NATURAL GAS and PETROLEUM.

FULLER'S EARTH.

- Petrography and origin of Fuller's earth: Allen, V. T., 4.
 Fuller's earth in southeast Missouri: Farrar, 1.

GAS. Refer to NATURAL GAS.

GEOPHYSICAL SURVEYS.

- Magnetometer results: Buehler, 25.
 Magnetic map of southeast Missouri embayment area, 1941: Buehler, 35A.
 Magnetic map of Missouri, 1943: Buehler, 38.
 Gravimetric map of Missouri, 1943: Buehler, 39.
 Geophysical prospecting: Farnham, 1.
 Earth resistivity measurements in northwest Missouri: Farnham, 2.
 Datum for magnetometer mapping: Farnham, 3.
 Experiments with Eotvos torsion balance in Tri-State District: George, 1.
 Magnetic map of Crawford Co.: Grohskopf, 1.
 Magnetic map of Joplin zinc-lead district: Grohskopf, 1.
 Resistivity measurements over a gas-producing shoestring sand: Heinicke, 1.
 Geophysical prospecting in Tri-State district: Jakosky, 1.
 Earth resistivity 100 feet depth: Keller, 1.
 Magnetic map of northwestern Missouri, 1938: McQueen, 12.
 Magnetic survey of Missouri, 1881: Nipher, 3.

- Magnetic susceptibility of rocks: Van Nostrand, 1.
- Transcontinental gravitational and magnetic profile: Wollard, 1.
- GLASS.**
- Year book of manufacture at St. Louis and Crystal City: Howe, 1.
- GLASS SAND.** Refer also to **SAND.**
- Glass sand of middle Mississippi basin: Burchard, 1.
- Glass sands: Burchard, 2.
- Sand at St. Louis used in making plate glass: Nipher, 2.
- Crystal City Quadrangle: Pike, R. W., 1.
- GOLD.**
- Gold in drift: Broadhead, 63, 73.
- Gold: Dake, 3.
- Missouri gold discovery: Reister, 1.
- Gold in north Missouri: Williams, C. P., 10.
- GRANITE.** Refer to **STONE, BUILDING** and **ORNAMENTAL.**
- GRAVEL.**
- Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
- Sand and gravel resources of Missouri: Dake, 8.
- Origin of sand and gravel: Dake, 13A, 13B, 13C.
- Geology of the Potosi-Edgehill Quadrangle: Lee, W., 2.
- Technical problems of sand and gravel industry: Prince, 1.
- Road making properties of Missouri stone and gravel: Williams, W. S., 1.
- IRON.**
- Deposits and Ores.*
- Geology of Miller Co.: Ball, S. H., 1.
- Analyses of iron ores: Blair, 1, 2.
- Sources of iron ore supply: Birkinbine, 1.
- Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
- Iron ores of Carboniferous age: Broadhead, 57, 83.
- Goethite from Adair Co.: Broadhead, 77.
- Analyses of iron ores: Chauvenet, R., 1, 2.
- Notes on samples of iron ore: Chauvenet, W. M., 1.
- Iron ores of Missouri: Crane, G. W., 1; Gage, 1; Nason, 1, 2; Schmidt, 1; Williams, C. P., 3, 5, 9.
- Beschreibung von Mineralvorkommen in Nordamerika:* Credner, 1.
- Formation and distribution of residual iron ores: Dake, 5.
- Formation and distribution of bog iron ore deposits: Dake, 6.
- Reed, Simson and Kelley copper and iron banks of Phelps Co.: Fay, 1.
- Iron ores at Bucklands Bank, Phelps Co.: Garvens, 1.
- Commercial iron sulfide deposits of northern Ozarks: Grawe, 4, 5, 8.
- Magnetic iron from Pilot Knob: Harrison, C., 1.
- Magnetite from Iron Mountain and Pilot Knob: Harrison, E., 1.
- Iron ores of the United States: Hunt, 4.
- Origin of crystalline iron ores: Julien, 1.
- Genesis of iron ores by replacement of limestone: Kimball, 1.
- Geology of the Rolla Quadrangle: Lee, W., 2.
- Geology of Pilot Knob iron mineralization: Meyer, C., 1; Steidtmann, 1.
- Iron ores of southeastern Missouri: Moore, P. N., 1.
- Theories of origin of magnetic iron ores: Nason, 8.
- Genesis of iron ores: Newberry, 6, 7; Robertson, J. D., 1.
- The ores of iron, their geographical distribution, etc.: Newton, 1.
- Mineral regions of Missouri, 1843: Niccollet, 3.
- Iron deposits of Arkansas, etc.: Penrose, 1.
- Mineral district of Iron Mountain Railroad: Phillips, J. V., 1.
- Geology of Lincoln Co., iron ore: Potter W. B., 1.
- Rueppelle iron mine: Pough, 1.
- Missouri hematite sinks: Pough, 2.
- Observations on Iron Mountain: Rath, 1; Lake, 1.
- Missouri iron ores: Raymond, R. W., 3, 5.
- Description of Iron Mountain and Pilot Knob: Shepard, C. U., 3.
- Origin of iron ores of Iron Mountain and Pilot Knob: Singewald, 1.
- Iron ores of Iron Mountain and Pilot Knob: Spurr, 6.
- The iron mines of Pilot Knob: Stopff, 1.
- Origin of iron deposits of Pilot Knob: Tarr, 44.
- Iron deposits of Missouri: Thompson, R. O., 2.
- Pre-Cambrian iron mineralization: Tolman, 10.
- Limonite deposits of southeastern Missouri: U. S. Bureau of Mines, 5, 14.
- Silver Hollow Bank, Franklin Co.: U. S. Bureau of Mines, 2.

- Filled sink iron deposits eastern-central Missouri: U. S. Bureau of Mines, 12.
- Iron Mountain: Von Groddeck, 1.
- Report on the Iron Mountain Sheet: Winslow, 15.
- Manganiferous iron ores: Anon., 2.
- Iron Industry.*
- Irondale iron interests: Conrad, —, 1.
- Iron industry of Missouri: Cozzens, 4.
- Iron: Dake, 1.
- Laboratory concentration of Missouri iron ores: DeVaney, 1.
- Metallurgical industries of south Missouri: Gallaher, P., 1.
- Grand Tower Iron works: King, 10.
- Technical problems of the iron ore industry: Richards, 1.
- Metallurgy of iron ore from southwest Missouri: Ross, B., 1.
- Metallurgical properties of Missouri iron ores: Schmidt, 5.
- Possibilities of a Missouri furnace obtaining iron ore from the state: Updike, 1.
- Technical problems of the Missouri pyrite industry: Williams, R. S., 1.
- Iron works outside St. Louis: Anon., 3.
- Iron Mines and Mining.*
- Mines of Cole Co.: Broadhead, 59.
- Iron ores of Missouri: Crane, 1.
- Report on St. Louis and Birmingham Iron Mining Co.: King, 7, 9 11.
- Practical rules for developing iron ore deposits: Schmidt, 4.
- Report on lands of the Birmingham Iron Mining Co.: Whitney, 1.
- Prospectus of Stanton Mining Co.: Whitney, 3.
- Iron mining in Missouri: Wittich, 3.
- LEAD.**
- Deposits and Ores.*
- Geology of Miller Co.: Ball, S. H., 1.
- Ozark region lead deposits: Bain, 6; Schmidt, 3.
- Lead and zinc deposits of Mississippi Valley: Bain, 9; Bastin, 2; Buckley, 18; Jenney, 1, 2.
- Zinc and lead ores: Bain, 15.
- Review of Haworth report on lead: Bain, 17.
- Lead and zinc region of northern Arkansas: Branner, 2.
- Southeast Missouri lead district: Broadhead, 74; Bryan, 1; Emmons, 1; Ruhl, 6.
- Mineral lands: Broadhead, 90.
- Geology of the Granby area: Buckley, 11.
- Genesis of lead and zinc ores of the Mississippi Valley: Buckley, 16.
- Disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22, 26; Buehler, 25A.
- Disseminated lead district of southeast Missouri: Cantwell, 1.
- Lead and zinc region of southwest Missouri: Clerc, 1; Garrison, 3; Schmidt, 2.
- Missouri lead and zinc regions: Crook, 1.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Oxidized lead ores from southeast Missouri: Evans, R. E., 1.
- Lead and zinc ores of Missouri: Findlay, 1.
- Lead ores in Missouri: Gage, 3, 4.
- Valley type lead-zinc deposits and the problems of mineral zoning: Garrels, 1.
- Chert rocks of sub-Carboniferous: Haworth, 1.
- Galena-Joplin lead and zinc district: Haworth, 14, 15, 16.
- Lead and zinc ores, their occurrence in relation to the coal area: Haddburg, 1.
- Ore deposits in limestone: Heinrich, C., 1.
- Wisconsin and Missouri lead region: Hodge, 1.
- Unique lead deposit, 1906: Johnson, R. D. O., 1.
- Lead and zinc fields of Ozark uplift: Johnson, W. H., 1.
- Ore deposits in southeastern Missouri: Kemp, 1.
- Report on the Mine La Motte Sheet: Keyes, 29.
- Diverse origin of lead deposits of Mississippi Valley: Keyes, 61.
- Geographic distribution of lead in Mississippi Valley: Keyes, 67.
- Ozark lead and zinc deposits: Keyes, 68, 70; Buckley, 24.
- Possible new lead ore area in Missouri: Kithel, 1.
- Structure of lead deposits: Leith, 2.
- Origin of Iowa lead: Leonard, 1.
- Lead regions of upper Mississippi: Locke, 1.
- Zinc and lead deposits of northern Arkansas: McKnight, E. T., 1.
- Geology of Morgan Co.: Marbut, 15.
- Description of lead ores of 1814: Meade, 1.
- Tri-State zinc-lead field: Naething, 1; Fowler, 1-11; Weidman, 2.
- Ores of the Joplin region: Naething, 2.
- Disseminated lead ores of southeast Missouri: Nason, 7, 9.
- Role of geology in prospecting for lead: Netzeband, 1.
- Mineral region of Missouri (1843): Nicollet, 3.

- Geology of the Ozark Lead Mine: Ohle, 1.
- Zones of alteration in the Bonneterre formation: Ohle, 2.
- Specific gravity of lead ores and tailings: O'Meara, 1.
- Geological reconnaissance of Arkansas: Owen, D. D., 7.
- Eureka Springs-Harrison Folio: Purdue, A. H., 2.
- Genesis of the Tri-State zinc and lead ores: Ridge, John, 1.
- Methods of analysis for lead: Robertson, J. D., 2.
- Bibliography of lead: Robertson, J. D., 4.
- Minerals of the Joplin District: Rogers, 6, 7.
- "Chloritic" minerals in ores of southeast Missouri: Ross, C. S., 1.
- Miami lead and zinc district: Ruhl, 5.
- Unconformity and deposits: Ruhl, 4.
- Ore deposits of Tri-State district: Sales, 1.
- Forms and origin of lead and zinc deposits: Schmidt, 6.
- Geology of Greene Co.: Shepard, E. M., 2.
- Mineral lands in Benton and Hickory Cos.: Shumard, 12.
- Lead in central and southeast Missouri: Siebenthal, 7.
- Origin of zinc and lead deposits of Joplin district: Siebenthal, 8.
- Lead and zinc deposits of the Joplin district, Missouri-Kansas: Smith, W. S. T., 1.
- Joplin District Folio: Smith, W. S. T., 2A.
- Composition of cleaned ores: Spencer, H. G., 2.
- Southeast Missouri ore-magmatic district: Spurr, 4.
- Cobalt-nickel-copper-lead deposits of Fredericktown: Tarr, 18.
- Miami-Picher zinc-lead district: Tarr, 33, 37; Weidman, 1.
- Origin of southeastern Missouri lead deposits: Tarr, 41.
- Lead deposits of Missouri: Thompson, R. O., 1.
- Lead ores of Missouri, 1827: Troost, 1.
- Geology of Moniteau Co.: Van Horn, F. B., 1.
- Missouri lead region: Von Groddeck, 1.
- Source of southeast Missouri lead: Wheeler, 9.
- Geology of southeast Missouri lead district: Wheeler, 12.
- Lead deposits of the Mississippi Valley: Whitney, 4.
- Lead ores of Missouri and their products: Williams, C. P., 5, 7, 9, 12.
- Lead and zinc ores of southwest Missouri: Wilson, J. N., 1.
- Lead and zinc deposits of Missouri: Winslow, 10, 14, 18.
- Disseminated lead ores: Winslow, 20.
- Zinc and lead in Arkansas: Wittich, 1.
- Mining, Ore Dressing and Smelting.*
- Early mines: Austin, 1; Bomford, 1.
- Laws of distribution of lead in southeast Missouri ores: Bagnara, 1.
- Washington Co. lead mine: Ball, S. H., 3.
- Mines of Morgan and Benton Cos., Broadhead, 58, 60.
- Lead mines in Cole Co.: Broadhead, 59.
- Southeast Missouri: Broadhead, 61, 62.
- Southwest Missouri lead interest: Broadhead, 98.
- Lead smelters: Broadhead, 99.
- Geology of the Granby area: Buckley, 11.
- Geology of the disseminated lead deposits in St. Francois and Washington Cos.: Buckley, 22.
- Lead and zinc mining in central states: Buckley, 23.
- Improvements in milling in southeast Missouri (1934): Clifford, 1.
- Milling methods and costs at a Flat River mill: Coghill, 6.
- History of lead mining in Missouri: Cobb, 2.
- Milling practice in the Lead Belt: Delano, 1, 2.
- Developing, mining, and smelting the ores of the Tri-State (Missouri-Kansas-Oklahoma) district: Fowler, 12.
- Mine La Motte, 1874: Frazer, 1.
- Lead mines in southeast Missouri: Gage, 2.
- Metallurgy of lead ores in lower Mississippi Valley: Garlich, 1.
- Metallurgy of lead ores: Gibb, 1; Harworth, 16.
- Mining and milling method in southeast Missouri (1914): Guess, 1.
- Drainage problems in Miami, Oklahoma: Heap, 1.
- Technical problems of southeast Missouri lead district: Jewell, 1; Netzeband, 2.
- Mine La Motte: a historic lead property in southeast Missouri: Keiser, 1.
- Ore dressing in southeastern Missouri: Kemp, 1.
- St. Joseph Lead Company prospects a chat pile: Larson, 1.

- Preliminary report on mines in 1855: Litton, 1.
- Lead mines and salines, 1805: McNair, 1.
- Lead mines of the Southwest, 1847: Moseley, 1.
- Geology of Ozark Lead Mine at Fredericktown: Ohle, 1, 2.
- Flintshire furnace treatment of lead ore at Desloge Mine: Ohmann-Dumensil, 1.
- Specific gravity of lead ores and tailings: O'Meara, 1.
- Prospect drilling in southeast Missouri: Poston, 1.
- Method and cost of mining at No. 8 mine, St. Louis Smelting and Refining Company: Poston, 2.
- Sinking practice and costs at the Pim Shaft, St. Francois Co.: Poston, 3.
- Lead smelting at Herculanum: Pulisfer, H. B., 1.
- American lead mine: Raymond, R. W., 1.
- Milling in southeastern Missouri (1913): Rice, 1.
- A view of the lead mines, 1819: Schoolcraft, 1.
- Balance sheets for mine and smelter production of domestic lead: Siebenthal, 32.
- Milling practice of the St. Joseph Lead Company: Stahl, 1.
- Lead mining industries tributary to the Frisco line: Stevens, 1.
- Mining practices of the St. Joseph Lead Company in southeast Missouri: Stockett, N. A., 1.
- Lead mines of upper Louisiana (territory), 1804: Stoddard, 1.
- Lead mines in Louisiana territory, 1812: Tiffin, 1.
- St. Louis Smelting and Refining Company, property at Fredericktown, Madison Co.: U. S. Bureau of Mines, 1, 10.
- Oronogo-Webb City-Duenweg district, Jasper Co.: U. S. Bureau of Mines, 3, 9.
- Capital Mining Company, Lawrence Co.: U. S. Bureau of Mines, 6.
- Dempsey Tract, Washington County: U. S. Bureau of Mines, 15.
- Concentration practice in southeast Missouri: Watt, 1.
- Lead and Zinc deposits of Missouri: Winslow, 14.
- Treatment of lead ores in Missouri: Williams, C. P., 8.
- Mining and treatment of lead and zinc ores: Wright, C. A., 1.
- The benevolent St. Joe: Anon., 11A.

Lead Pigments and Salts.

- Lead pigments and salts, resources and production 1921-1923: Siebenthal, 24, 27, 30.

Note: For earlier year see reports by Siebenthal under *Lead Resources*.

Lead Resources and Production.

- U. S. lead resources: Bain, 12.
- Lead and zinc resources of Missouri: Buckley, 20.
- Lead resources 1907-1923: Siebenthal, 4, 6, 7, 9, 10, 11, 13, 15, 16, 18, 20, 23, 25, 31.
- Lead resources of Missouri, 1882-84: Williams, A., Jr., 1, 2.

LIME.

- Geology of Miller Co.: Ball, S. H., 1.
- Lime and cement resources: Buehler, 1.
- Geology of Jackson Co.: McCourt, 1.
- Geology of Pike Co.: Rowley, 24.
- Geology of Greene Co.: Shepard, E. M., 2.
- Joplin District Folio: Smith, W. S. T., 2A.
- Technical problems of the lime industry: Smith, R. W., 2.
- Geology of Moniteau Co.: Van Horn, F. B., 1.
- Geology of Ste. Genevieve Co.: Weller, S., 27.

LIMESTONE. Refer also to LITHOGRAPHIC STONE; and STONE, BUILDING and ORNAMENTAL.

- Miscellaneous analyses (limestone): Clark, F. W., 1.
- Miscellaneous analyses (limestone): Eakins, 1.
- Technical problems of the ground limestone industry: Reynolds, 1.
- Limestone mining at Ste. Genevieve: Smith, R. W., 1.
- Flexibility of limestone: Winslow, 7.

LITHOGRAPHIC STONE.

- Missouri resources, 1883-84: Williams, A., Jr., 2.

MANGANESE.

- Manganese deposits of Missouri: Grawe, 7; Harder, 1.
- Report on Mine La Motte Sheet: Keyes, 29.
- Manganese, its uses, ores, and deposits: Penrose, 1.
- Manganiferous iron ores: Anon., 2.

MARBLE. Refer also to STONE, BUILDING and ORNAMENTAL.

- Study of base exchange and attendant disintegration in Carthage marble: Claridge, 1.
- Technical problems in marble industry: Mayes, 1.
- Report on the property of the St. Louis Marble Company: Swallow, 18.
- Onyx and marble: Triplett, 1.

MINE INSPECTION.

- Report of state mine inspector 1887-89: Wolfe, 1-3.
- Report of state mine inspector 1889-92: Woodson, 1-3, 5.
- Report of state mine inspector 1893-99: Evans, C., 1-7.
- Report of state lead and zinc mine inspector 1900: Quinby, 1.
- Report of state coal mine inspector 1900-1903: Evans, C., 8-11.
- Report of state lead and zinc mine inspector, 1901-1902: Williams, G. K., 1, 2.
- Report of state lead and zinc mine inspector 1903: Quinby, 2.
- Report of state mine inspector 1904: Williams, G. K., 3.
- Report of state mine inspector 1905-07: Marsteller, 1-3.
- Report of state mine inspector 1908-11: Bartholomaeus, 1-4.
- Report of state mine inspector 1912-20: Hill, G., 1-9.
- Report of state mine inspector 1921-24: Roberts, J. E., 1-4.
- Report of state mine inspector 1925-32: Fenix, 1-8.
- Report of state mine inspector 1933-39: Grenfell, 1-7.
- Report of state mine inspector 1940-43: Skinner, 1-4.

MINERAL RESOURCES, GENERAL.

- Missouri mineral resources: Broadhead, 113.
- The South's materials for the Country's defense: Bryson, 1.
- Geology and mineral deposits of the Ozarks region: Buehler, 9, 12.
- Mineral resources of Missouri. Buehler, 13, 18.
- Mineral region of southwest Missouri: Case, T. S., 1.
- Chemical and mineral resources of the St. Louis industrial district: Cuno, 1.
- Geology and mineral resources of St. Louis Quadrangle: Fenneman, 4.
- Missouri - mining industry, past and present: Forbes, 3.
- Mineral production of Missouri: Hinchey, 4.
- Mineral wealth of southwest Missouri: Lloyd, 1.
- Mineral resources in 1855: Maughes, 2.
- Mineral production in Missouri, 1923-24: Pond, 1.
- Mineral production in Missouri, 1927-28: McQueen, 2.
- Mineral production in Missouri, 1929-30: McQueen, 7.
- Mineral production in Missouri, 1931-32: McQueen, 8.

- Geology and mineral resources of Missouri, 1848: Prout, 1.
- Mineral deposits of Missouri, 1840: Shepard, C. U., 1.
- Geology and mineral resources of Missouri, 1867-1879: Swallow, 16, 20.
- Metallic wealth of the United States compared with that of other countries, 1854: Whitney, 2.
- Mineral wealth of Missouri: Wilber, 1.
- Mineral resources of the United States: Williams, A., Jr., 1, 2.
- Mineral discoveries, 1871: Williams, C. C., 2.

MINERAL WATER. Refer also to WATER RESOURCES AND SUPPLY.

- Mineral waters of the Graydon sandstone: Babcock, 1.
- Mineral Springs. Broadhead, 4, 53.
- Fluorine in certain waters: Hoeman, 1.
- Bromine content of saline ground waters: Meckfessel, 1.
- Analyses of mineral springs of U. S.: Peale, 1.
- Mineral waters of Missouri: Schweitzer, 1, 3.
- Mineral water of Henry, St. Clair, Johnson, Benton, and Saline Cos.: Woodward, A. E., 1, 2.

MINING AND INDUSTRIAL INTERESTS.

- Joplin: Beatty, 1.
- Southwest Missouri lead interest: Broadhead, 98.
- Present trends in mineral dressing: Clemmer, 1.
- Civic interest in mineral industries of Missouri: Smith, G. C., 1.
- Small scale mining possibilities in southeast Missouri: Weigel, W. W., 2.

MINING, GENERAL.

- Early mining in Missouri: Broadhead, 34.
- Coal mine surveying: Burkhart, 1.
- Minerals and mining in southwest Missouri, 1888: Gwynn, 1.
- Representative mining industries: Jones, 1.

NATURAL GAS.

- Natural gas in Missouri: Ashburner, 3.
- Blue Springs field: Bartle, 1.
- Effective porosity in gas fields: Bartle, 5.
- Eastern interior basin, 1939-40: Ball, 1.
- Gas resources Jackson Co.: Clair, 2.
- Gas resources of Jackson and Cass Cos.: Clair, 3.
- Oil and gas: Greene, F. C., 4, 5, 6, 8, 9, 10.

- Natural gas in eastern Kansas: Hay, R., 1.
 Resistivity measurements over a gas-producing shoestring sand: Heinicke, 1.
 Development of northern Mid-continent field in 1940: Koester, 1.
 Geology of Jackson Co.: McCourt, 1.
 Geology of Northwestern Missouri: McQueen, 12.
 Forest City basin: McQueen, 13; Osborn, 1; Potter, P. G., 1.
 Rosedale gas and coal wells: Thorne, 2.
 Occurrence of oil and gas about St. Louis: Wheeler, 11.
 Oil and gas possibilities in Belton area: Wilson, M. E., 1.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- NICKEL.**
 Report on Mine La Motte Sheet: Keyes, 29.
 Treatment of nickeliferous ores at Mine La Motte: Minger, 1.
 Minerals of Madison Co.: Tarr, 17.
 Cobalt-nickel-copper-lead deposits of Fredericktown: Tarr, 18.
 Cobalt - nickel - iron - copper sulfides: Tarr, 36.
 St. Louis Smelting and Refining Company property at Fredericktown, Madison Co.: U. S. Bureau of Mines, 1, 10.
 Mineral resources of Missouri 1882-84: Williams, A., Jr., 1, 2.
- OIL.** Refer to **PETROLEUM.**
- ONYX.**
 Onyx deposits of Boiling Springs Cave: Stauber, 1.
 Onyx and marble: Triplett, 1.
- ORIGIN OF ORES, or MINERAL DEPOSITS.**
 Origin of Joplin ore: Bain, 5, 8.
 Lead and zinc deposits of the Ozark region: Bain, 6.
 Copper deposits of Missouri: Bain, 11, 13.
 Types of ore deposits: Bain, 18.
 Structural features of Joplin ore: Bain, 14, 16, 19.
 Lead and zinc deposits of the Mississippi Valley: Bastin, 2; Jenny, 1.
 Geology of the Granby Area: Buckley, 11.
 Genesis of lead and zinc ores in the Mississippi Valley: Buckley, 16.
 Geology of the disseminated lead deposits in St. Francois and Washington Cos.: Buckley, 22.
 Disseminated-lead district of southeastern Missouri: Buehler, 25A.
 Origin of Missouri zinc ores: Cox, 1.
 Iron ores of Missouri: Crane, G. W., 1.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Southeast Missouri lead district: Emmons, W. H., 1.
 Origin of sulfide ores of Mississippi Valley: Emmons, 2.
 Diatremes and certain ore-bearing pipes: Emmons, 3.
 Oxidized lead ore from southeast Missouri: Evans, R. E., 1.
 Ore deposits of the Tri-State district: Fowler, 1, 2, 4, 5, 6, 7, 8, 9, 10, 11; Sales, 1.
 Spectrographic evidence on origin of ores of the Mississippi Valley type: Graton, 1.
 Pyrites deposits of Missouri: Grawe, 8.
 Significance of minute quantities of minerals in rocks: Keyes, 64, 86.
 Diverse origins and diverse times of formation of the lead and zinc deposits of the Mississippi Valley: Keyes, 61.
 Ozark lead and zinc deposits, their genesis, localization and migration: Keyes, 68-70.
 Iron-ore deposits of Iron Mountain, Missouri: Lake, 1.
 Origin of Iowa lead: Leonard, 1.
 Zinc and lead deposits of northern Arkansas: McKnight, 1.
 Geology of the Pilot Knob iron mineralization: Meyer, C., 1.
 Probable origin of ore deposits of Missouri: Meyer, F. C., 1.
 Report on iron ores of Missouri: Nason, 2.
 Disseminated lead ores of southeastern Missouri: Nason: 7, 9.
 Theories of origin of magnetic iron ores: Nason, 8.
 Characteristics of zinc deposits in North America: Nason, 10.
 Origin of ore deposits: Newberry, 5.
 Genesis of iron ores: Newberry, 6, 7.
 Composition of vein solutions as shown by liquid inclusions in minerals: Newhouse, 1.
 Temperatures of formation of the Mississippi Valley lead-zinc deposits: Newhouse, 2.
 Genesis of the Tri-State zinc and lead ores: Ridge, J., 1.
 Notes on formation of iron ores: Robertson, J. D., 1.
 Iron ores of Missouri: Schmidt, 1.
 Lead and zinc regions of southwest Missouri: Schmidt, 2.
 Lead region of central Missouri: Schmidt, 3.

- Origin of lead and zinc deposits: Schmidt, 6.
- Origin of zinc and lead deposits of the Joplin area: Siebenthal, 8.
- Origin of iron ores of Iron Mountain and Pilot Knob: Singewald, 1.
- Alnoite pipe, its contact phenomena and ore deposition near Avon: Singewald, 3.
- Lead and zinc deposits of the Joplin district, Missouri-Kansas: Smith, W. S. T., 1.
- Joplin District Folio: Smith, W. S. T., 2A.
- Ore deposits of the Joplin (Tri-State) region: Smith, W. S. T., 6.
- Ore magmas versus magmatic waters: Spurr, 1.
- Alkaline sulfides as collectors of metals: Spurr, 2.
- Lead-zinc chimneys in limestone: Spurr, 3.
- Southeast Missouri ore-Magmatic district: Spurr, 4.
- Iron deposits of Pilot Knob, Missouri: Steidtmann, 1.
- Genesis of Missouri lead and zinc deposits: Tarr, 8.
- Barite deposits of Missouri: Tarr, 7, 11.
- A hydrothermal deposit in Wayne Co.: Tarr, 35.
- Origin of southeastern Missouri lead deposits: Tarr, 41.
- Origin of marcasite sink hole deposits: Tarr, 43.
- Origin of iron deposits of Pilot Knob: Tarr, 44.
- Pre-Cambrian iron mineralization: Tolman, 10.
- Miami-Picher zinc-lead district: Weidman, 1.
- Tri-State zinc-lead region: Weidman, 2.
- Tourmaline in jasperoid of the Miami-Picher zinc-lead district: Weidman, 3.
- Source of southeast Missouri lead: Wheeler, H. A., 9.
- Geology of southeast Missouri lead district: Wheeler, H. A., 12.
- Origin of lead and zinc ores: Winslow, 10.
- Lead and zinc deposits of Missouri: Winslow, 14, 18.
- Disseminated lead ores of southeastern Missouri: Winslow, 20.
- PETROLEUM.**
- Eastern interior basin, 1939-40: Bell, 1.
- Bitumen, Asphaltum, Petroleum pyro-schists, etc.: Broadhead, 79.
- Oil resources of Jackson Co.: Clair, 2.
- Oil resources of Jackson and Cass Cos.: Clair, 3.
- Types of folds of northern mid-continent area: Clark, S. K., 1.
- Petroleum: Dake, 2.
- Oil and oil structures in Oklahoma-Kansas zinc-lead mining field: Fowler, 3.
- Oil and gas pools of western Missouri: Greene, F. C., 4.
- Oil and gas possibilities of Savannah area: Greene, F. C., 5.
- Oil and gas developments in Missouri, 1933-34: Greene, F. C., 6.
- Oil and gas developments in Missouri, 1935-36: Greene, F. C., 8.
- Oil and gas possibilities in Filmore area, Andrew Co., and Gower area Clinton and Buchanan Cos.: Greene, F. C., 9.
- Oil exploration 1939: Hager, 1.
- Development of north mid-continent field in 1940: Koester, 1.
- Stratigraphy and structure of Forest City Basin in Kansas: Lee, 3.
- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- Convergence studies of mid-continent region: Levorsen, 1.
- Geology of Jackson Co.: McCourt, 1.
- Geology of northwestern Missouri: McQueen, 12.
- Geology of the Forest City Basin: McQueen, 13; Osborn, 1.
- Forest City Basin: Potter, P. G., 1.
- Oil springs in Missouri: Shumard, 10.
- Missouri section of Forest City Basin has wide lease play: Taylor, F. B., 1.
- Occurrence of oil and gas about St. Louis: Wheeler, 11.
- Oil and gas possibilities of the Belton area: Wilson, M. E., 1.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- Missouri studies oil possibilities: Anon., 12.
- PIGMENTS.** Refer also to LEAD PIGMENTS and ZINC PIGMENTS.
- Paints and clays: Broadhead, 5.
- PORTLAND CEMENT.** Refer to CEMENT.
- PROSPECTING.** Refer also to GEOPHYSICAL SURVEYING.
- Role of geology in prospecting for lead: Netzeband, 1.
- Prospecting for zinc in limestone: Sminnov, 1.
- QUARRIES.** Refer also to STONES, BUILDING AND ORNAMENTAL.
- Quarrying industry: Buckley, 5.

RESOURCES, GENERAL. Refer also to MINERAL RESOURCES.

- St. Louis area, 1882: Bliss, 1.
- Missouri's resources displayed at World's Fair, Chicago, 1893: Francis, 1.
- Resources museum: Thompson, M., 1.

ROADS.

- Public roads, improvement and maintenance: Buckley, 13.
- Road problems of the Ozarks: Harris, 1, 2.
- Road making properties of Missouri stone and gravel: Williams, W. S., 1.

ROCK WOOL.

- Rock wool resources of central Missouri: McQueen, 11.

SALT.

- Lead mines and salines, 1805: McNair, 1.

SAND. Refer also to GLASS SAND.

- Geology of the Eminence-Cardareva Quadrangle: Bridge, 6.
- Geology of the St. Louis Quadrangle: Fenneman, 4.
- Sand and gravel resources of Missouri: Dake, 8.
- Origin of sand and gravel: Dake, 13A, 13B, 13C.
- Sands, etc.: Ladd, 1, 2.
- Geology of the Rolla Quadrangle: Lee, 2.
- Silica sand producer uses modern methods and supplies a full time market: Liberg, 1.
- Geology of Jackson Co.: McCourt, 1.
- Technical problems of sand and gravel industry: Prince, 1.
- Geology of Pike Co.: Rowley, R. R., 24.
- Geology of Moniteau Co.: Van Horn, F. B., 1.

SILVER.

- Report on Mine La Motte Sheet: Keyes, 29.
- Silver in central states: Sibenthal, 6.
- Native silver in glacial material: Tarr, 3.
- Minerals of Madison Co.: Tarr, 17.
- Silver-lead tungsten mineralization at Silver Mines: Tolman, 2, 3.

SINK HOLE DEPOSITS.

- Note: There is much that has been written on this topic, but the information is scattered in articles that do not bear the expression "Sink hole deposits" in their titles. For

further information consult works on BARITE, CLAY, IRON, LEAD, and ZINC.

"Filled sink" or "cave" deposits in the Ozark region; Buehler, 33.

Missouri hematite sinks: Pough, 2.

Origin of marcasite sink hole deposits: Tarr, 43.

Filled sink iron deposits of eastern central Missouri: U. S. Bureau of Mines, 12.

SOILS. Consult soil reports of the U. S. Dept. of Agriculture and others.

STONE, BUILDING AND ORNAMENTAL.

Geology of Miller Co.: Ball, S. H., 1.

Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.

Rocks admitting fine polish: Broadhead, 32.

Building stone: Broadhead, 91.

Marbles of southeast Missouri: Broadhead, 97.

Egyptian stone: Broadhead, 104.

Quarrying industry of Missouri: Buckley, 5.

Geology of the St. Louis Quadrangle: Fenneman, 4.

Building stones of the U. S.: Hawes, 1.

Leavenworth-Smithville Folio: Hinds, H., 6.

Missouri building and ornamental stone: Keyes, 25.

Report on Mine La Motte Sheet: Keyes, 29.

Geology of the Rolla Quadrangle: Lee, 2.

Geology of Jackson County: McCourt, 1.

Technical problems in cut stone industry: Mayes, 1.

Building and ornamental stones: Merrill, 1, 2.

Building and paving stones of Missouri: Phillips, H., 1.

Eureka Springs-Harrison Folio: Purdue, 2.

Geology of Pike Co.: Rowley, 24.

Geology of Greene Co.: Shepard, E. M., 2.

Strength of building material: Smith, C. A., 1.

Joplin District Folio: Smith, W. S. T., 2A.

Effect of heat on Missouri granites: Tarr, 1, 2.

Geology of Moniteau Co.: Van Horn, F. B., 1.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Flexibility of limestone: Winslow, 7.

Report on the Iron Mountain Sheet: Winslow, 15.

Granite quarries: Anon., 5.

TIN.

- Tin* resources of Missouri 1883-84: Williams, A., Jr., 2.
Tin in Missouri: Williams, C. P., 1.

TRIPOLI.

- Tripoli: Heinz, 2.
American "tripoli": Hovey, 1.
Tripoli deposits at Seneca, Missouri: Nelson, 1; Siebenthal, 3.
Tripoli deposits of Oklahoma: Perry, E. S., 1.
The tripoli industry: Plumb, 1.
Technical problems of the tripoli, chat, and ground limestone industries: Reynolds, 1.

TUNGSTEN.

- Greisen and associated mineralization at Silvermine, Missouri: Singewald, 2.
Silver-lead tungsten mineralization at Silver Mine: Tolman; 2, 3.
Mineral resources of Missouri, 1883-84: Williams, A., Jr., 2.

WATER POWER SITES.

- Gasconade River: Barnard, 1.
Water power resources of region tributary to Mississippi River on the west, below Dubuque, Iowa: Porter, 1.
Power utilization of Meramec Spring: Walsh, 1.
Geology of dam sites on Gasconade and Grand River: Wentworth, 1, 2.
Geology of dam sites on Meramec, Big and Bourbeuse Rivers: McQueen, 6.

WATER RESOURCES AND SUPPLY. Refer also to MINERAL WATER.

- Rolla water supply: Anderson, 1.
Geology of Miller Co.: Ball, S. H., 1.
Metropolitan St. Louis water supply: Barr, 1.
Water resources of Missouri: Beckman, 1.
Surface waters of Missouri: Beckman, 2.
Large springs of Missouri: Beckman, 3.
Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
Gaging of the Gasconade River: Collins, 1.
Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Geology of Vernon Co.: Greene, F. C., 3.
Leavenworth-Smithville Folio: Hinds, H., 6.
Geology of the Rolla Quadrangle: Lee, 2.
Geology of Jackson Co.: McCourt, 1.
Geology of the Calhoun Sheet: Marbut, 4.

Geology of the Clinton Sheet: Marbut, 5.

Geology of the Lexington Sheet: Marbut, 7.

Geology of the Richmond Quadrangle: Marbut, 8.

Large springs in the United States: Meinzer, 1.

A state plan for Missouri, Water plan: Missouri State Planning Board, 1.

Automatic water sampler: Mundt, 1.

Springfield water supply: Park, 2.

Eureka Springs-Harrison Folio: Purdue, 2.

Geology of Pike Co.: Rowley, 24.

Water supply of Columbia: Schweitzer, 1, 2.

Geology of Greene Co.: Shepard, E. M., 2.

Water resources of Missouri: Shepard, E. M., 3, 5A, 6.

Water resources of Joplin district: Smith, W. S. T., 2, 2A.

Geology of Moniteau Co.: Van Horn, F. B., 1.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Mineral water of Henry, St. Clair, Johnson, Benton and Saline Cos.: Woodward, A. E., 1, 2.

ZINC.

Deposits and Ores.

Southwest Missouri zinc deposits: Adams, G. I., 2.

Ore guides used in Tri-State District: Ageton, 1.

Geology of Miller Co.: Ball, S. H., 1.

Origin of Joplin ores: Bain, 5.

Ozark region zinc deposits: Bain, 6.

Mississippi valley zinc deposits: Bain, 9; Buckley, 18.

Missouri zinc deposits: Bain, 10, 15.

Structural features of Joplin ores: Bain, 14, 16, 19.

Special report on lead and zinc: Bain, 17.

Lead and zinc deposits of the Mississippi Valley: Bastin, E. S., 2.

Joplin district: Boyd, 1.

Zinc and lead region of northern Arkansas: Branner, 2.

Calamine in Missouri-Kansas district: Brittain, 1.

Sheet ground of Joplin district: Brittain, 2.

Mines of Morgan and Benton Cos.: Broadhead, 58.

Geology of the Granby area: Buckley, 11.

Genesis of lead and zinc ores of the Mississippi Valley: Buckley, 16.

Lead and zinc mining in central states: Buckley, 23.

Types of lead and zinc deposits: Buckley, 26.

- Characteristics of zinc deposits of North America: Buehler, 11.
- Geology of the Mary Arnold mine: Clark, E. L., 1.
- Lead and zinc of southwest Missouri: Clerc, 1.
- Ore deposits of Joplin region: Clerc, 2.
- Origin of Missouri zinc ores: Cox, 1.
- Missouri lead and zinc regions: Crook, 1.
- Lead and zinc ores of Missouri: Findlay, 1.
- Ore deposits of Tri-State district: Dake, 17; Fowler, 1, 2, 8, 10.
- Miami-Picher zinc-lead district: Fowler, 5.
- Structural control of ore deposits in Tri-State zinc and lead district: Fowler, 9.
- Geology of Tri-State zinc area: Fowler, 1-12.
- Joplin zinc district: Garrison, 1.
- Zinc and lead deposits of southwestern Missouri: Garrison, 3.
- Herald mine, Joplin, Missouri: Gregory, C., 1.
- Chert rocks of sub-Carboniferous: Haworth, 1.
- Galena-Joplin lead and zinc district: Haworth, 14, 15, 16.
- Lead and zinc ores, occurrence in relation to coal area: Hedburg, 1.
- Joplin zinc district: Herrick, R. L., 1.
- Zinc bearing spring water: Hillebrand, 1.
- Lead and zinc deposits of Mississippi Valley: Jenney, 1, 2.
- Lead and zinc fields of Ozark uplift: Johnson, W. H., 1.
- Diverse origins of zinc deposits: Keyes, 61.
- Geographic distribution of zinc deposits of Mississippi Valley: Keyes, 67.
- Ozark lead and zinc deposits: Keyes, 68, 70; Buckley, 24.
- Migration of Joplin zinc belt: Keyes, 69.
- First mention of zinc ore: Keyes, 79.
- Mining districts of southeast Missouri: Kitson, 1.
- Structures of Tri-State zinc deposits: Leith, 2.
- Origin of Iowa zinc deposits: Leonard, 1.
- Zinc and lead deposits of northern Arkansas: McKnight, 1.
- Geology of Morgan Co.: Marbut, 15.
- Oklahoma-Kansas-Missouri zinc-lead field: Naething, 1, Weidman, 2.
- Ores of Joplin district: Naething, 2.
- Characteristics of zinc deposits in North America: Nason, 10.
- Relations of fracture zones to ore bodies in the Tri-State District: Netzeband, 1A.
- Temperatures of formation of the Mississippi Valley lead-zinc deposits: Newhouse, 2.
- Geologic hand book of the Miami mining district: Perry, E. S., 2.
- Eureka Eprings-Harrison Folio: Purdue, 2.
- Zinc deposits of southern Missouri: Raymond, 1.
- Genesis of the Tri-State zinc and lead ores: Ridge, 1.
- Calamine deposits of southwest Missouri: Ruhl, 3.
- Unconformity and deposits: Ruhl, 4.
- Miami lead and zinc district: Ruhl, 5.
- Ore deposits of Tri-State district: Sales, 1.
- Lead and zinc regions of southwest Missouri: Schmidt, 1.
- Forms and origins of lead and zinc ores: Schmidt, 6.
- Zinciferous clays of southwest Missouri: Seamon, 1.
- Zinc industry of Missouri. Seamon, 3.
- Geology of Greene Co.: Shepard, E. M., 2.
- Zinc in central and southeast Missouri: Siebenthal, 7.
- Origin of zinc and lead deposits of Joplin district: Siebenthal, 8.
- Prospecting for zinc in limestone: Sminnov, 1.
- Pierson Creek Mine: Smith, O. M., 1.
- Lead and zinc deposits of Joplin district: Smith, W. S. T., 1, 2A.
- Ore deposits of Joplin region: Smith, W. S. T., 6.
- Lead and zinc chimneys in limestone: Spurr, 3.
- Ores of Joplin region: Spurr, 5.
- Joplin zinc district: Steele, 1.
- Zinc mining industries tributary to Frisco line: Stevens, 1.
- Miami-Picher zinc-lead district: Tarr, 33, 37.
- Calamine in Missouri: Troost, 1.
- Oronogo-Webb City-Duenweg district, Jasper Co.: U. S. Bureau of Mines, 3, 9.
- Crane and Chenoweth mines, Jasper Co.: U. S. Bureau of Mines, 4.
- Capitol Mining Co., Lawrence Co.: U. S. Bureau of Mines, 6.
- Tailings on Troupe tract, Eggert lease, Jasper Co.: U. S. Bureau of Mines, 8.
- Little Mary tailing pile, Jasper Co.: U. S. Bureau of Mines, 7.
- Valle Mines dumps, Jefferson and St. Francois Cos.: U. S. Bureau of Mines, 11.

- Dempsey Tract, Washington County: U. S. Bureau of Mines, 15.
- Geology of Moniteau Co.: Van Horn, F. B., 1.
- Miami-Picher zinc-lead district: Weidman, 1.
- Tri-State zinc-lead district: Weidman, 2.
- Zinc ores and their products: Williams, C. P., 4, 5, 7, 9.
- Lead and zinc ore of southwest Missouri: Wilson, J. N., 1.
- Lead and zinc deposits of Missouri: Winslow, 10, 14, 18.
- Zinc and lead in Arkansas: Wittich, 1.
- Mining, Ore Dressing and Smelting.*
- Flotation in the Tri-State District: Anderson, C. O., 1, 2.
- Mining methods and costs in Waco District: Banks, 1.
- Sheet-ground mine in southwest Missouri: Boardman, D. G., 1.
- Joplin district: Boyd, 1.
- Calamine mining: Brittain, 1.
- Ground breaking in the Joplin District: Brittain, 1A.
- History of smelting in the Joplin District: Brittain, 1B.
- Mines of Morgan and Benton Cos.: Broadhead, 58.
- Ore dressing in the Joplin District: Bruce, 1.
- Geology of the Granby area: Buckley, 11.
- Lead and zinc mining in central states: Buckley, 23.
- Mining costs in the Missouri-Kansas District (1913): Burgess, 1.
- Miami zinc-lead district: Chapman, T., 1.
- Milling methods in Tri-State District: Coghill, 1.
- Premiums and penalties on Tri-State zinc ores: Coghill, 2.
- Progressive enrichment of zinc chats with decreasing size: Coghill, 3.
- Concentration in Tri-State District: Coghill, 4.
- Fine grinding in Tri-State District: Coghill, 5.
- Milling practice at White Bird Concentration: Crabtree, 2.
- Mining and milling in Galena-Joplin District: Crane, W. R., 2, 3.
- Lead and zinc mining in the Quapaw District: Crane, W. R., 4.
- Zinc and lead ore bodies in Tri-State District: Ellis, 1.
- Improvements in milling Missouri zinc ores (1907): Lord, 1.
- Developing, mining and smelting the ores of the Tri-State (Missouri-Kansas-Oklahoma) district: Fowler, 12.
- Herald Mine, Joplin, Missouri: Gregory, C., 1.
- Development of Tri-State zinc and lead mining district: Harbaugh, 1, 2.
- Drainage problem in Miami, Oklahoma: Heap, 1.
- Zinc mines at close of 1900: Hedburg, 2.
- Yankee ingenuity in a Tri-State mill: Heinz, 1.
- Sheet-ground mining in the Joplin District: Higgins, 1.
- Siliceous dust in relation to pulmonary disease among miners in the Joplin District: Higgins, 2.
- Lead and zinc mining industry of southwest Missouri and southeast Kansas: Holibaugh, 1.
- Salts in Tri-State mill waters. Howes, 1.
- Central Milling in the Tri-State District: Isern, 1.
- Mining methods at Barr Mine, Tri-State District: Keener, 1.
- Mining methods at Hartley-Grantham Mine, Tri-State District: Keener, 2.
- Mining districts of southeast Missouri: Kitson, 1.
- Has the Miami-Picher district passed the zenith?: Koelker, 1.
- Pulmonary disease among miners in the Joplin District: Lanza, 1.
- Ammonia leaching for zinc ores: Lawrence, 1.
- Reopening Tri-State zinc mines: Long, E. C., 1.
- Tri-State flood control cuts mine pumping: McCuskey, 1.
- An example of mining zinc and lead ore at Picher, Oklahoma: Netzeband, 1B.
- An example of prospecting and valuing a lead-zinc deposit: Netzeband, 1C.
- Profit from mineral waste, Tri-State tailings yield commercial profits: Netzeband, 1D.
- An open-pit zinc-lead mine in the Tri-State District: Netzeband, 1E.
- Recent improvements in the mining practice of the Tri-State District: Nicholson, 1.
- Bibliography on electrothermic metallurgy of zinc: O'Harra, 1.
- Zinc metallurgy: O'Harra, 2, 3, 4.
- Bibliography on zinc retorts and condensers: O'Harra, 5.
- Mining and smelting at Granby: Perkins, 1.
- The Medina Mill, Webb City, Missouri: Pulsifer, H. B., 2.
- Methods of analysis (for zinc): Robertson, J. D., 3.
- Missouri zinc ores: Raymond, R. W., 6, 7.

- Milling practice at the Netta Mine, Picher, Okla.: Sanson, 1.
- Zinc industry of Missouri: Seamon, 3.
- Balance sheet for mine and smelter production of zinc: Siebenthal, 32.
- Pierson Creek Mine: Smith, O. M., 1.
- Preliminary report on lead and zinc of Oklahoma: Snider, 1.
- Composition of cleaned ores: Spencer, H. G., 1, 2.
- Zinc mining industries tributary to Frisco line: Stevens, 1.
- The Missouri-Kansas zinc and lead mines (1900): Titcomb, 1.
- The zinc ores of the Joplin District: Waring, 1.
- Tri-State today: Wells, T. L., 1.
- Lead and zinc deposits of Missouri: Winslow, 14.
- Mining and treatment of lead and zinc ores: Wright, C. A., 1, 3.
- Ore-dressing practice in the Joplin District: Wright, C. A., 2.
- Development and underground mining practice in the Joplin District (1917): Young, H. I., 1.
- Zinc Pigments and Salts.*
- Zinc pigments and salts, production and resources, 1921-23: Siebenthal, 24, 27, 30.
- Zinc ores and their products: Williams, C. P., 4.
- Preparation of zinc oxide: Williams, C. P., 11.
- Zinc Resources and Production.*
- U. S. Zinc resources: Bain, 12.
- Production of zinc in Missouri: Broadhead, 120.
- Lead and zinc resources of Missouri: Buckley, 20.
- Mineral wealth of southwest Missouri: Lloyd, 1.
- Zinc resources, 1906-1924: Siebenthal, 5-7, 9-12, 14, 17, 19, 21, 22, 26, 28, 34.
- For earlier years see articles on zinc by Siebenthal.

Mineralogy

ACTINOLITE.

Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Petrography and petrology of Mount Devon diabase parphyry: Muilenburg, 1.

AERINITE.

Aerinite in north St. Louis Co.: Robertson, P., 5.

ALBITE.

Crystalline rocks of Missouri: Hawthorth, 10.
Pegmatite in the Sheehan Quarry, Graniteville, Missouri: Tolman, 6.

ALLOPHANE.

Pyrite deposits of Missouri: Grawe, 8.
Minerals of Galena-Joplin district: Rogers, 7.

ALUMINITE.

Mineralogy of Missouri: Wheeler, 6.

ALUNITE.

Manganese deposits of Missouri: Grawe, 7.

ALUNOGEN.

Mineralogy of Missouri: Wheeler, 6.

ANDESINE.

Crystalline rocks of Missouri: Hawthorth, 10.

ANGLESITE.

Geology of the Granby area: Buckley, 11.
Report on Mine La Motte Sheet: Keyes, 29.
Minerals of Galena-Joplin district: Rogers, 7.
Alteration of galena to anglesite: Swartzlow, 3.
Lead and zinc deposits of Missouri: Winslow, 14.

ANHYDRITE.

Notes on mineralogy of Missouri: Leonhard, A. V., 1.

ANKERITE.

Pyrite deposits of Missouri: Grawe, 8.
Minerals of Galena-Joplin district: Rogers, 7.

ANNABERGITE.

Report on Mine La Motte Sheet: Keyes, 29.
Notes on mineralogy of Missouri: Leonhard, A. V., 1.

ANORTHITE.

Crystalline rocks of Missouri: Hawthorth, 10.

APATITE.

Crystalline rocks of Missouri: Hawthorth, 10.
Report on Mine La Motte Sheet: Keyes, 29.
Alnoite pipe near Avon, Missouri: Singewald, 3.
Heavy accessory minerals of granites of Missouri: Tolman, 5.

ARAGONITE.

Minerals of Missouri: Broadhead, 38.
Lead and zinc deposits of the Mississippi Valley Area: Bastin, 2.
Notes on mineralogy of Missouri: Leonhard, A. V., 1.

ARSENOPYRITE.

Minerals of Madison Co.: Tarr, 17.
Heavy accessory minerals of granites of Missouri: Tolman, 5.
Mineralogy of Missouri: Wheeler, 6.

ARTIFICIAL MINERALS.

Laboratory formation of minerals: Buehler, 26.
Artificial crystallized lead silicate, from Bonne Terre, Missouri: Dana, E. S., 1.
Artificial lead silicate from Bonne Terre: Wheeler, 1.

ASBOLITE.

Report on Mine La Motte Sheet: Keyes, 29.
Southeast Missouri lead deposits: Tarr, 41.

AUGITE.

Crystalline rocks of Missouri: Hawthorth, 10.
Report on Mine La Motte Sheet: Keyes, 29.
Mineralogy of Missouri: Wheeler, 6.

AURICHALCITE.

Aurichalcite in Missouri: Keller, 8.
Minerals of Galena-Joplin district:
Rogers, 7.

AZURITE.

Pyrite deposits of Missouri: Grawe, 8.
Report on Mine La Motte Sheet: Keyes, 29.
Minerals of Galena-Joplin district:
Rogers, 7.
Minerals of Madison Co.: Tarr, 17.

BARITE. Refer also to **BARITE, ECONOMIC GEOLOGY.**

Barite gangue in lead ore: Broadhead, 58, 59.
Crystals from Last Chance mine: Broadhead, 77.
Story of barytes: Clark, A. W., 1.
Pyrite deposits of Missouri: Grawe, 8.
Mineralogical notes: Koenig, 1.
Notes on a Missouri barite: Luedeking, 1.
Minerals of Galena-Joplin district:
Rogers, 7.
Joplin district Folio: Smith, W. S. T., 2A.
Barite deposits: Tarr, 6, 7, 11.
Barite vein cutting granite: Tarr, 29.
Lead and zinc deposits of Missouri:
Winslow, 14.

BAUXITE.

Cobble of bauxite in "Lafayette" gravel: Robertson, P., 8.
Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.

BERYL.

Pegmatite at Graniteville: Tolman, 6, 7.

BIEBERITE.

Lead and zinc deposits of Mississippi Valley area: Bastin, 2.
Minerals of Madison Co.: Tarr, 17.

BIOTITE.

Crystalline rocks of Missouri: Hawthorth, 10.
Report on Mine La Motte Sheet: Keyes, 29.

BORNITE.

Colloidal primary copper at Cornwall mines: Rust, 1.

BRAUNITE.

Manganese deposits of Missouri: Grawe, 7.

BRAVOITE.

Bravoite from a new locality: Rasor, 1.

BROCHANTITE.

Lead and zinc deposits of Mississippi Valley area: Bastin, 2.
Pyrite deposits of Missouri: Grawe, 8.
Southeast Missouri lead deposits: Tarr, 41.

BROOKITE.

Heavy accessory minerals of granites of Missouri: Tolman, 5.

BYTOWNITE.

Crystalline rocks of Missouri: Hawthorth, 10.

CACOXENITE.

Mineralogy of Missouri: Wheeler, 6.

CALAMINE. Refer also to **ZINC DEPOSITS, ECONOMIC GEOLOGY.**

Geology of the Granby area: Buckley, 11.
Minerals of Galena-Joplin district:
Rogers, 7.
Calamine deposits of southwest Missouri: Ruhl, 3.
Growth of calamine: Seamon, 1.
Joplin District Folio: Smith, W. S. T., 2A.
Calamine in Missouri: Troost, 1.
Lead and zinc deposits of Missouri:
Winslow, 14.

CALCITE.

Geology of the Granby area: Buckley, 11.
Specimen of calcite from Joplin: Gratacap, 1.
Crystal forms of calcite from Joplin, Missouri: Farrington, 2.
Phosphorescent calcites from Joplin: Headden, 1.
Report on Mine La Motte Sheet: Keyes, 29.
Minerals of Galena-Joplin district:
Rogers, 7.
Joplin District Folio: Smith, W. S. T., 2A.
Minerals of Madison Co.: Tarr, 17.

CALEDONITE.

Minerals of Galena-Joplin district:
Rogers, 7.

CASSITERITE.

Geology of the Silver Mine area: Tolman, 3.
Heavy accessory minerals of granites of Missouri: Tolman, 5.
Pegmatite at Graniteville: Tolman, 6.

CELESTITE.

Occurrence of Strontium minerals in Perry and Cape Girardeau Cos.: McQueen, 9.

CERUSSITE.

- Geology of the Granby area: Buckley, 11.
Report on Mine La Motte Sheet: Keyes, 29.
Minerals of Galena-Joplin district: Rogers, 7.
Joplin District Folio: Smith, W. S. T., 2A.
Alteration of galena to cerussite: Swartzlow, 3.
Minerals of Madison Co.: Tarr, 17.
Lead and zinc deposits of Missouri: Winslow, 14.

CHALCANTHITE.

- Pyrite deposits of Missouri: Grawe, 8.
Minerals of Galena-Joplin district: Rogers, 7.

CHALCOCITE.

- Minerals of Galena-Joplin district: Rogers, 7.
Colloidal primary copper at Cornwall mines: Rust, 1.

CHALCOPYRITE. Refer also to **COPPER, ECONOMIC GEOLOGY.**

- Geology of the Granby area: Buckley, 11.
Pyrite deposits of Missouri: Grawe, 8.
Report on Mine La Motte Sheet: Keyes, 29.
Joplin District Folio: Smith, W. S. T., 2A.
Minerals of Galena-Joplin district: Rogers, 7.
Minerals of Madison Co.: Tarr, 17.
Geology of Silver Mine area: Tolman, 3.
Lead and zinc deposits of Missouri: Winslow, 14.

CHLORITE.

- Crystalline rocks of Missouri: Haworth, 10.
Report on Mine La Motte Sheet: Keyes, 29.
Chloritic minerals in ores of southeastern Missouri: Ross, C. S., 1.

CHROMITE.

- Alnoite pipe near Avon, Missouri: Singewald, 3.

CHRSOCOLLA.

- Minerals of Galena-Joplin district: Rogers, 7.
Mineralogy of Missouri: Wheeler, 6.

CHRSOLITE.

- Mineralogy of Missouri: Wheeler, 6.

CLIACHITE.

- Mineral composition and origin of Missouri flint and diaspore clays: Allen, V. T., 5.

COBALT. Refer to **LINNAEITE.****COPIAPITE.**

- Pyrite deposits of Missouri: Grawe, 8.
Minerals of Galena-Joplin district: Rogers, 7.
Mineralogy of Missouri: Wheeler, 6.

COPPER. Refer to **CHALCOPYRITE, AZURITE** and **MALACHITE.****COVELLITE.**

- Minerals of Galena-Joplin district: Rogers, 7.
Colloidal primary copper at Cornwall Mines: Rust, 1.

CUPRITE.

- Minerals of Galena-Joplin district: Rogers, 7.

DIASPORE. Refer also to **CLAY, ECONOMIC GEOLOGY.**

- Mineral composition and origin of Missouri flint and diaspore clays: Allen, V. T., 5.
Diasporite in Missouri, 1917: Wherry, 1.

DICKITE.

- Dickite in St. Louis Co.: Allen, V. T., 8.
Dickite in Perry Co., Missouri: Grohs-kopf, 2.
Dickite in Missouri: Tarr, 39.

DIOPSIDE.

- Alnoite pipe near Avon, Missouri: Singewald, 3.

DOLOMITE.

- Geology of the Granby area: Buckley, 11.
Formation of magnesian rocks: Hunt, 4.
Report on Mine La Motte Sheet: Keyes, 29.
Dolomite in the Fredericktown area: McQueen, 14.
Minerals of Galena-Joplin district: Rogers, 7.
Joplin District Folio: Smith, W. S. T., 2A.
Minerals of Madison Co.: Tarr, 17.
Lead and zinc deposits of Missouri: Winslow, 14.

DUFRENITE.

- The Ruepple iron mine: Pough, 1.
Colloidal primary copper at Cornwall mines: Rust 1.
Mineralogy of Missouri: Wheeler, 6.

ENARGITE.

- Lead and zinc deposits of the Mississippi Valley area: Bastin, 2.
Genesis of Tri-State zinc and lead ores: Ridge, 1.

EPIDOTE.

Crystalline rocks of Missouri: Hawsorth, 10.

Report on Mine La Motte Sheet: Keyes, 29.

Minerals of Madison Co.: Tarr, 17.

Heavy accessory minerals of granites of Missouri: Tolman, 5.

EPSOMITE.

Lead and zinc deposits of the Mississippi Valley area: Bastin, 2.

Notes on mineralogy of Missouri: Leonhard, A. V., 1.

FAMATINITE.

Colloidal primary copper at Cornwall mines: Rust, 1.

FELDSPAR. Refer to **ALBITE**, **ANDESINE**, **ANORTHITE**, **BYTOWNITE**, **LABRADORITE**, **MICROCLINE**, **OLIGOCLASE** and **ORTHOCLASE**.**FERRO-GOSLARITE.**

Ferro-goslarite, a new variety of zinc sulfate: Wheeler, 2.

Mineralogy of Missouri: Wheeler, 6.

FLUORITE.

Fluorite in Perry Co.: Grohskopf, 2.

Crystalline rocks of Missouri: Hawsorth, 10.

Report on Mine La Motte Sheet: Keyes, 29.

Minerals of Madison Co.: Tarr, 17.

Geology of Silver Mine area: Tolman, 3.

Heavy accessory minerals of granites of Missouri: Tolman, 5.

GALENA. Refer also to **LEAD DEPOSITS**, **ECONOMIC GEOLOGY**.

Geology of the Granby area: Buckley, 11.

Cleavage surfaces of galena: Head, 1.

Report on Mine La Motte Sheet: Keyes, 29.

Minerals of Galena-Joplin district: Rogers, 7.

Joplin District: Smith, W. S. T., 2A.

Fluid inclusions in sphalerite and galena: Smith, W. S. T., 4.

Alteration of galena to anglesite and cerussite: Swartzlow, 3.

Minerals of Madison Co.: Tarr, 17.

Geology of Silver Mine area: Tolman, 3.

Lead and zinc deposits of Missouri: Winslow, 14.

GARNET.

Crystalline rocks of Missouri: Hawsorth, 10.

Minerals of Madison Co.: Tarr, 17.

Heavy accessory minerals of granites of Missouri: Tolman, 5.

GIBBSITE. Refer also to **CLAY**, **ECONOMIC GEOLOGY**.

Mineral composition and origin of Missouri flint and diaspore clays: Allen, V. T., 5.

GLAUCONITE.

Missouri glauconite: Allen, V. T., 12.

Pyrite deposits of Missouri: Grawe, 8.

Glauconite in dolomite and limestone: Tarr, 10.

Origin of glauconite: Tarr, 13.

Minerals of Madison Co.: Tarr, 17.

GOETHITE.

Goethite from Adair Co.: Broadhead, 77.

Pyrite deposits of Missouri: Grawe, 8.

GOLD.

Gold in drift: Broadhead, 63, 73.

The Missouri gold discovery: Reister, 1.

Gold in north Missouri: Williams, A. C., 10.

GOSLARITE.

Minerals of Galena-Joplin district: Rogers, 7.

Joplin District Folio: Smith, W. S. T., 2A.

Mineralogy of Missouri: Wheeler, 6.

GREENOCKITE.

Geology of the Granby area: Buckley, 11.

Occurrence of greenockite on calcite from Joplin: Cornwall, 1.

Minerals of Galena-Joplin district: Rogers, 7.

Joplin District Folio: Smith, W. S. T., 2A.

GYPSUM.

Formation of gypsum: Hunt, 4.

Pyrite deposits of Missouri: Grawe, 8.

Gypsum rosettes in Jefferson Co.: Robertson, P., 1.

Minerals of Galena-Joplin district: Rogers, 7.

Joplin District Folio: Smith, W. S. T., 2A.

HALITE.

Notes on mineralogy of Missouri: Leonhard, A. V., 1.

HALLOYSITE. Refer also to **CLAY**, **ECONOMIC GEOLOGY**.

Cheltenham clay of Missouri: Allen, V. T., 10.

Pyrite deposits of Missouri: Grawe, 8.

HAUSMANNITE.

Notes on mineralogy of Missouri: Leonhard, A. V., 1.

HEMATITE. Refer also to **IRON DEPOSITS, ECONOMIC GEOLOGY.**

- Pyrite deposits of Missouri: Grawe, 8.
- Origin of crystalline iron ores: Julien, 1.
- Report on Mine La Motte Sheet: Keyes, 29.
- Geology of Pilot Knob iron mineralization: Meyer, C., 1.
- Rueppel iron mine: Pough, 1.
- Missouri hematite sinks: Pough, 2.

HORNBLENDE.

- Crystalline rocks of Missouri: Haworth, 10.
- Report on Mine La Motte Sheet: Keyes, 29.

HUBNERITE.

- Manganese deposits of Missouri: Grawe, 7.
- Minerals of Madison Co.: Tarr, 17.

HYALITE.

- Mineralogy of Missouri: Wheeler, 6.

HYDROZINCITE.

- Geology of the Granby area: Buckley, 11.
- Minerals of Galena-Joplin district: Rogers, 7.
- Lead and zinc deposits of Missouri: Winslow, 14.

ILMENITE.

- Crystalline rocks of Missouri: Haworth, 10.
- Report on Mine La Motte Sheet: Keyes, 29.

IRON. Refer to **HEMATITE, LIMONITE** and **MAGNETITE.****IRON, NATIVE.**

- Native iron in Coal Measures: Allen, E. T., 1.

KAOLINITE. Refer also to **CLAY, ECONOMIC GEOLOGY.**

- The Cheltenham clay of Missouri: Allen, V. T., 10.
- Pyrite deposits of Missouri: Grawe, 8.
- Kaolin deposits of Bollinger Co.: Orton, 1.
- Kaolinite deposited from solution: Tarr, 42.

LABRADORITE.

- Crystalline rocks of Missouri: Haworth, 10.
- Report on Mine La Motte Sheet: Keyes, 29.

LAZULITE.

- Notes on mineralogy of Missouri: Leonhard, A. V., 1.

LEAD. Refer to **GALENA, CERUSSITE** and **ANGLESITE.****LEADHILLITE.**

- Geology of the Granby area: Buckley, 11.
- Leadhillite pseudomorphs at Granby Missouri: Foote, 1.
- Cupreous sulfate-carbonate of lead: Le Conte, 1.
- Leadhillite in Missouri: Pirsson, 1.
- Mineralogy of Missouri: Wheeler, 6.

LEPIDOLITE.

- Tungsten minerals and deposits: Hess, 1.
- Mineralogy of Missouri: Wheeler, 6.

LEUCOXENE.

- Crystalline rocks of Missouri: Haworth, 10.
- Heavy accessory minerals of granites of Missouri: Tolman, 5.

LIMONITE. Refer also to **IRON DEPOSITS, ECONOMIC GEOLOGY.**

- Pyrite deposits of Missouri: Grawe, 8.
- Report on Mine La Motte Sheet: Keyes, 29.
- Limonite deposits of southeastern Missouri: U. S. Bureau of Mines, 5.

LINARITE.

- Minerals of Galena-Joplin district: Rogers, 7.

LINNAEITE. Refer also to **COBALT, ECONOMIC GEOLOGY.**

- Composition and occurrence of linnaeite: Lix, 1.
- Minerals of Madison Co.: Tarr, 17.
- Cobalt-nickel-copper-lead deposits of Fredericktown, Missouri: Tarr, 18.
- The linnaeite group of cobalt-nickel-iron-copper sulfides: Tarr, 36.

MAGNETITE. Refer also to **IRON DEPOSITS, ECONOMIC GEOLOGY.**

- Crystalline rocks of Missouri: Haworth, 10.
- Analysis of magnetite from Iron Mountain and Pilot Knob: Harrison, E., 1.
- Report on Mine La Motte Sheet: Keyes, 29.
- Magnetic iron ores: Nason, 8.

MALACHITE. Refer also to **COPPER, ECONOMIC GEOLOGY.**

- Pyrite deposits of Missouri: Grawe, 8.
- Report on Mine La Motte Sheet: Keyes, 29.
- Minerals of Galena-Joplin district: Rogers, 7.
- Minerals of Madison Co.: Tarr, 17.

MANGANESE. Refer to **BRAUNITE, HUBNERITE, PSILOMELANE** and **WAD.****MANGANOCALCITE.**

- Mineralogy of Missouri: Wheeler, 6.

MANGANESERICITE.

Manganese deposits of Missouri:
Grawe, 7.

MARCASITE.

Geology of the Granby area: Buckley,
11.
Pyrite deposits of Missouri: Grawe, 4,
5, 8.
Minerals of Galena-Joplin district:
Rogers, 7.
Joplin District Folio: Smith, W. S. T.,
2A.
Minerals of Madison Co.: Tarr, 17.
Alternating deposition of pyrite, mar-
casite: Tarr, 27.
Origin of marcasite sink hole deposits:
Tarr, 43.
Lead and zinc deposits of Missouri:
Winslow, 14.

MELACONITE.

Lead and zinc deposits of the Missis-
sippi Valley area: Bastin, 2.
Origin of Southeast Missouri lead de-
posits: Tarr, 41.

MELANITE.

Missouri minerals: Haworth, 8.

MELANTERITE.

Pyrite deposits of Missouri: Grawe, 8.
Minerals of Galena-Joplin district:
Rogers, 7.

MELILITE.

Explosive volcanism in southeastern
Missouri: Rust, 2.
Alnoite pipe near Avon, Missouri:
Singewald, 3.

MELNIKOVITE.

Alternating deposition of pyrite, mar-
casite, and possibly melnikovite:
Tarr, 27.

MENDOZITE.

Mendozite (soda alum) in St. Louis
and Callaway Cos.: Keller, 2.

METEORITES.

Butler, Bates Co., meteorite: Broad-
head, 65; Farrington, 1; Smith, J. L.,
1.
Warrenton, Warren Co., meteorite:
Broadhead, 80; Farrington, 1; Smith,
J. L., 2, 3.
Meteorite stones: Broadhead, 81.
Meteorites: Cohen, 1.
Lanton, Howell Co., meteorite: Culli-
son, 2.
Cape Girardeau meteorite: Dana, E.
S., 2.
Mincy, Taney Co., meteorite: Farring-
ton, 1; Kunz, 1; Shepard, C. U., 4.
Archie, Cass Co., meteorite: Haynes,
1; Nininger, 1.

Little Piney, Phelps Co., meteorite:
Herrick, E. C., 1; Shepard, C. U., 2.
Catalogue of meteorites in the Har-
vard museum: Huntington, 1.
Perryville, Perry Co., meteorite: Mer-
rill, 3.
Kansas City, Jackson Co., meteorite:
Merrill, 4; Parker, J. D., 1.
Baxter, Stone Co., meteorite: Ninin-
ger, 2, 3.
Central Missouri meteorite: Preston, 1.
St. Genevieve meteorite: Ward, 1.
Billings, Christian Co., meteorite:
Ward, 2.

MICROCLINE.

Crystalline rocks of Missouri: Ha-
worth, 10.
Report on Mine La Motte Sheet: Keyes,
29.

MILLERITE.

Millerite, 1886: Haworth, 3.
New locality for millerite: Keyes, 6.
Millerite in St. Louis: Leonhard, 2.

MIMETITE.

Mineralogy of Missouri: Wheeler, 6.

MINERALOGY, MISCELLANEOUS.

Joplin minerals and their associa-
tions: Brittain, 3.
Mineralogy of Cole Co.: Broadhead,
12.
Minerals of Missouri: Broadhead, 38,
100, 131.
Mineralogy of channel sands north of
Columbia: Craig, 1.
Collection of economic geology at U. S.
National Museum: Dewey, 1.
Traite des gites minereaux: Fuchs, 1.
Notes on minerals: Garrison, 2.
Rare minerals in Missouri: Gleason,
1.
A mineral thermometer: Grawe, 6.
Minerals of southwest Missouri, 1888:
Gwynn, 1.
Missouri minerals: Haworth, 8.
Phosphorescent calcites from Joplin:
Headen, 1.
Fluorescence and phosphorescence:
Keith, 1.
Common rocks and minerals of Mis-
souri: Keller, 9.
Mineralogy of Missouri: Leonhard,
A. V., 1.
X-ray analysis of clays: McQueen, 15.
Minerals in St. Louis and vicinity:
Magness, 1.
Minerals of the Tri-State district:
Palmer, 1.
Catalogue of American minerals and
localities, 1825: Robinson, 1.
List of minerals from Joplin district:
Rogers, 3, 6, 7.

- Mineral composition of Mississippi River sands: Russell, R. D., 1.
Catalogue of Missouri minerals: Wetmore, 1.
Mineralogy of Missouri: Wheeler, 6.
Famous mineral localities: (1) Keokuk geode region, (2) Joplin district: Wherry, 2, 3.
- MINIUM.**
Notes on mineralogy of Missouri: Leonhard, A. V., 1.
- MOLYBDENITE.**
Heavy accessory minerals of granites of Missouri: Tolman, 5.
- MONTMORILLONITE.** Refer also to CLAY, ECONOMIC GEOLOGY.
Petrography and origin of Fuller's Earth of southeastern Missouri: Allen, V. T., 4.
- MORENOSITE.**
Lead and zinc deposits of the Mississippi Valley area: Bastin, 2.
Origin of southeast Missouri lead deposits: Tarr, 41.
- MUSCOVITE.**
Report on Mine La Motte Sheet: Keyes, 29.
Minerals of Galena-Joplin district: Rogers, 7.
Pegmatite at Graniteville, Missouri: Tolman, 6.
- NICKEL.** Refer to SIEGENITE and BRAVOITE.
- NITER.**
Notes on mineralogy of Missouri: Leonhard, A. V., 1.
- OLIVENE.**
Crystalline rocks of Missouri: Haworth, 10.
Report on Mine La Motte Sheet: Keyes, 29.
Alnoite pipe near Avon, Missouri: Singewald, 3.
- OLIVENITE.**
The Ruepple iron mine: Pough, 1.
- OLIGOCLASE.**
Crystalline rocks of Missouri: Haworth, 10.
- ORTHOCLASE.**
Crystalline rocks of Missouri: Haworth, 10.
Report on Mine La Motte Sheet: Keyes, 29.
- PEROFSKITE.**
Alnoite pipe near Avon, Missouri: Singewald, 3.
- PHLOGOPITE.**
Alnoite pipe near Avon, Missouri: Singewald, 3.
- PICKERINGITE.**
Note on hydrous magnesium aluminum sulfate: Broadhead, 56.
- PICROPHARMACOLITE.**
Mineralogy of Missouri: Wheeler, 6.
- PIEDMONTITE.**
Crystalline rocks of Missouri: Haworth, 10.
Mineralogy of Missouri: Wheeler, 6.
- PLUMBOGUMMITE.**
Plumbo-resinite: Le Conte, 1.
Notes on mineralogy of Missouri: Leonhard, A. V., 1.
- PSILOMELANE.**
Manganese deposits of Missouri: Grawe, 7.
- PYRITE.**
Geology of the Granby area: Buckley, 11.
Pyrite deposits of Missouri: Grawe, 8.
Iron sulfide ores of Ozarks: Grawe, 4, 5.
Origin of pyrite concretions: Mathias, 1.
Minerals of Galena-Joplin district: Rogers, 7.
Joplin District Folio: Smith, W. S. T., 2A.
Minerals of Madison Co.: Tarr, 17.
Alternating deposition of pyrite and marcasite: Tarr, 27.
Syngenetic pyritization: Tarr, 28.
Geology of the Silver Mine area: Tolman, 3.
Lead and zinc deposits of Missouri: Winslow, 14.
- PYROLUSITE.**
Geology of the Granby area: Buckley, 11.
Manganese deposits of Missouri: Grawe, 7.
- PYROMORPHITE.**
Geology of the Granby area: Buckley, 11.
Minerals of Galena-Joplin district: Rogers, 7.
Lead and zinc deposits of Missouri: Winslow, 14.
- PYROPHYLLITE.**
Mineralogy of Missouri: Wheeler, 6.
- PYRRHOTITE.**
Report on Mine La Motte Sheet: Keyes, 29.
Notes on Mineralogy of Missouri: Leonhard, A. V., 1.

QUARTZ. Refer also to **PETROLOGY AND PETROGRAPHY.**

- Geology of the Granby area: Buckley, 11.
 Quartz druse in Potosi formation: Dake, 15.
 Pyrite deposits of Missouri: Grawe, 8.
 Huge quartz geode: Grinstead, 1.
 Crystalline rocks of Missouri: Hawthorth, 10.
 Report on Mine La Motte Sheet: Keyes, 29.
 Joplin District Folio: Smith, W. S. T., 2A.

RHODOCHROSITE.

- Mineralogy of Missouri: Wheeler, 6.

RUTILE.

- Heavy accessory minerals of granites of Missouri: Tolman, 5.

SERICITE.

- Crystalline rocks of Missouri: Hawthorth, 10.
 Sericite of unusual composition: Meyer, D. B., 1.
 Report on the Mine La Motte Sheet: Keyes, 29.
 Geology of the Silver Mine area: Tolman, 3.

SERPENTINE.

- Notes on mineralogy of Missouri: Leonhard, A. V., 1.
 Alnoite pipe near Avon, Missouri: Singewald, 3.

SIDERITE.

- Pyrite deposits of Missouri: Grawe, 8.

SIEGENITE. Refer also to **COBALT, ECONOMIC GEOLOGY.**

- The linnaeite group of cobalt-nickel-iron-copper sulfides: Tarr, 36.
 Origin of southeast Missouri lead deposits: Tarr, 41.

SILVER, including ARGENTIFEROUS GALENA.

- Native silver in galena material: Tarr, 3.
 Minerals of Madison Co.: Tarr, 17.
 Silver-lead-tungsten mineralization at Silver Mine: Tolman, 2, 3.

SMITHSONITE. Refer also to **ZINC, ECONOMIC GEOLOGY.**

- Geology of the Granby area: Buckley, 11.
 Minerals of Galena-Joplin district: Rogers, 7.
 Joplin District Folio: Smith, W. S. T., 2A.
 Lead and zinc deposits of Missouri: Winslow, 14.

SPHALERITE. Refer also to **ZINC, ECONOMIC GEOLOGY.**

- Minerals of Joplin and their associations: Brittain, 3.
 Geology of the Granby area: Buckley, 11.
 Notes on minerals: Garrison, 1.
 Report on the Mine La Motte Sheet: Keyes, 29.
 Study of the chemical composition and mineralogical relationship of sphalerite at Silver Mine: La Røge, 1.
 Minerals of Galena-Joplin district: Rogers, 7.
 Joplin District Folio: Smith, W. S. T., 2A.
 Fluid inclusions in sphalerite and galena: Smith, W. S. T., 4.
 Secondary character of pebble and ruby jack: Smith, W. S. T., 5.
 Minerals of Madison Co.: Tarr, 17.
 Geology of the Silver Mine area: Tolman, 3.
 Occurrence of blende in lignite: Wheeler, 5.
 Lead and zinc deposits of Missouri: Winslow, 14.

SPINEL.

- Heavy accessory minerals of granites of Missouri: Tolman, 5.

STOLZITE.

- Tungsten minerals and deposits: Hess, 1.
 Minerals of Galena-Joplin district: Rogers, 7.

STRONTIANITE.

- Occurrence of strontium minerals in Perry and Cape Girardeau Cos., Missouri: McQueen, 9.
 Mineralogy of Missouri: Wheeler, 6.

SULPHUR.

- Pyrite deposits of Missouri: Grawe, 8.
 Minerals of Galena-Joplin district: Rogers, 7.

SZOMOLNOKITE.

- Pyrite deposits of Missouri: Grawe, 8.

TALC.

- Mineralogy of Missouri: Wheeler, 6.

TITANITE.

- Heavy accessory minerals of granites of Missouri: Tolman, 5.

TOPAZ.

- Crystalline rocks of Missouri: Hawthorth, 10.
 Topaz and associated minerals from Einstein silver mine: Ross, C. S., 2.
 Greisen and associated mineralization at Silvermine, Mo.: Singewald, 2; Tolman, 2, 3, 6.

TOURMALINE.

Heavy minerals in the Roubidoux and other sandstones: Cordry, 1.

Heavy accessory minerals of the Devonian sandstones: Gruner, 1.

TREMOLITE.

Manganese deposits of Missouri: Grawe, 8.

TUNGSTEN. Refer to HUBNERITE and WOLFRAMITE.

TUNGSTITE.

Report on the Mine La Motte Sheet: Keyes, 29.

Notes on mineralogy of Missouri: Leonhard, A. V., 1.

URALITE.

Mineralogy of Missouri: Wheeler, 6.

VIVIANITE.

Mineralogy of Missouri: Wheeler, 6.

WAD.

Manganese deposits of Missouri: Grawe, 7.

Report on the Mine La Motte Sheet: Keyes, 29.

WAVELLITE.

Mineralogy of Missouri: Wheeler, 6.

WITHERITE.

Notes on mineralogy of Missouri: Leonhard, A. V., 1.

WOLFRAMITE.

Crystalline rocks of Missouri: Hawthorth, 10.

Report on the Mine La Motte Sheet: Keyes, 29.

Geology of the Silver Mine area: Tolman, 3.

WURTZITE.

Minerals of Galena-Joplin district: Rogers, 7.

XONOTLITE.

Alnoite pipe near Avon, Missouri: Singewald, 3.

ZINC. Refer to SPHALERITE, CALAMINE and SMITHSONITE.

ZINNWALDITE.

Crystalline rocks of Missouri: Hawthorth, 10.

Report on the Mine La Motte Sheet: Keyes, 29.

Geology of the Silver Mine area: Tolman, 3.

ZIRCON.

Crystalline rocks of Missouri: Hawthorth, 10.

Heavy accessory minerals of granites of Missouri: Tolman, 5.

ZOISITE.

Heavy accessory minerals of granites of Missouri: Tolman, 5.

Petrology and Petrography



IGNEOUS ROCKS.

- Ordovician bentonite: Allen, V. T., 1, 2.
 Discussion of "an alnoite pipe, its contact phenomena and ore deposition near Avon, Missouri": Ball, S. H., 4.
 Lead and zinc deposits of the Mississippi Valley: Bastin, (and others) 2.
 Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
 Age of Missouri porphyry: Broadhead, 71, 72.
 Archean rocks of Missouri: Broadhead, 96.
 Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Igneous rocks at Skrainka, Madison Co.: Denham, 1.
 Structural and economic geology of Missouri: Gallaher, J. A., 2.
 Labradorite-hyper-oranite: Goldich, 1.
 Crystalline rocks of Missouri: Hathworth, 5, 6, 7, 10, 13.
 Report on the Mine La Motte Sheet: Keyes, 29.
 Granite rocks of Missouri: Keyes, 16.
 Geographic relations of the granites and porphyries in the eastern part of the Ozarks: Keyes, 20.
 Igneous geology of Ste. Genevieve Co.: Kidwell, 1.
 Igneous geology of St. Francois Mountains (western half): Koch, H. L., 1.
 Geology of Pilot Knob iron mineralization: Meyer, C., 2.
 Structural geology of felsites of Iron Mountain: Meyer, C., 2.
 Petrography and petrology of Mount Devons diabase porphyry: Muilenburg, 1.
 Igneous geology of the eastern Ironton and western Fredericktown quadrangles: Robertson, F., 1.
 Flow sequence in felsites: Robertson, F., 2.
 Topaz and associated minerals from the Einstein silver mine, Madison Co.: Ross, C. S., 2.
 Pegmatite Hill (Decaturville): Ruhl, 2.

- Explosive volcanic activity in southeastern Missouri: Rust, 2.
 Greisen and associated mineralization at Silvermine, Missouri: Singewald, 2; Tolman, 2, 3.
 Alnoite pipe and its contact phenomena and ore deposition near Avon: Singewald, 3.
 A high-temperature vein in Madison Co.: Tarr, 21.
 Intrusive relation of granite to rhyolite in southeast Missouri: Tarr, 32.
 Post-Devonian igneous intrusion in southeastern Missouri: Tarr, 34.
 Hydrothermal deposit in Wayne Co.: Tarr, 35.
 Origin of the Decaturville dome: Tarr, 38.
 Quartz dikes: Tolman, 1.
 Granitic intrusions: Tolman, 4.
 Heavy accessory minerals of granite: Tolman, 5.
 Granite, pegmatite and replacement veins: Tolman, 6, 7.
 Igneous activity in southeastern Missouri: Tolman, 8, 9.
 Geology of northwest quarter of Ironton Quadrangle: Walker, 1.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Igneous rocks of Arkansas: Williams, J. F., 1.
 Igneous rock types of eastern half of the St. Francois Mountains: Wing, 1.
 Lead and zinc deposits of Missouri: Winslow, 14.
 Report on the Iron Mountain Sheet: Winslow, 15.
 Paleozoic eruptives in Missouri: Winslow, 19.

SEDIMENTARY ROCKS.

- Chertification in Tri-State district: Agar, 1.
 Mineral composition and origin of Porters Creek formation: Allen, V. T., 3.
 Petrography and origin of fuller's earth of southeastern Missouri: Allen, V. T., 4.
 Mineral composition and origin of Missouri flint and diaspora clays: Allen, V. T., 5.
 Mineralized spherulitic limestone in the Cheltenham fire clay: Allen, V. T., 7.

- Terminology of medium grained sediments: Allen, V. T., 9.
- Density, porosity and compaction: Athy, 1.
- Dolomite and chert and their origin: Ball, S. H., 1.
- Mississippian chert in St. Louis area: Barton, 1.
- Relation of chert to stylolites: Bastin, 1.
- Flint chips: Broadhead, 107.
- Miscellaneous analyses: Clarke, F. W., 1.
- Origin of Missouri cherts: Dean, 1.
- Chert and chertification in the Tri-State district: Fowler, 4, 7; Gregory, F. E., 1.
- Petrology of Pennsylvanian cycles of St. Louis area: Frank, A. J., 1.
- Breccia in St. Louis limestone: Gordon, 1; Grawe, 2; Hinchey, 2.
- Heavy accessory minerals of Devonian sandstones of southern Missouri: Gruner, 1.
- Effect of gravitational compaction on the surface of sedimentary rock: Hedbert, 1.
- Devonian limestone breccia in southwestern Missouri: Hershey, 3.
- Upland loess of Missouri; its mode of formation: Hershey, 8.
- Study of Missouri cherts: Hovey, 1.
- Formation of magnesian rocks: Hunt, 4.
- Differential packing as a possible display of bedding: Keller, 7.
- Eolian origin of loess: Keyes, 42.
- Genesis of certain cherts: Keyes, 65.
- Metallic content of rocks: Keyes, 86.
- Silicification of erosion surfaces: Leith, 1.
- Comparisons of Missouri sandstones: Lodwick, 1.
- Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
- Dolomite in the Fredericktown area: McQueen, 14.
- Sandstones of the Ozark region: Marbut, 12.
- Limestone conglomerate in the lead region of St. Francois Co.: Nason, 5.
- A mineralogical study of loess near St. Charles: Oefelein, 1.
- Effect of gravitational compaction on the structure of sedimentary rocks: Rubey, 1.
- Jasperoid of the Joplin district: Smith, W. S. T., 3.
- Oolitic rock of secondary origin: Swartzlow, 1.
- Dolomitization and origin of granularity in Chouteau limestone: Swartzlow, 4.
- Further evidence for secondary oolites: Swartzlow, 5.
- Origin of chert in the Burlington limestone: Tarr, 5.
- Siliceous oolites in shale: Tarr, 9.
- Glauconite in dolomite and limestone of Missouri: Tarr, 10.
- Contribution to the origin of dolomite: Tarr, 12.
- A possible factor in the origin of dolomite: Tarr, 16.
- Is Chalk a chemical deposit: Tarr, 23.
- Origin of chert and flint: Tarr, 23, 26.
- Silicification of erosion surfaces (discussion): Tarr, 25.
- Notes on 1934-35 articles on siliceous sediments: Tarr, 40.
- Compaction of sediments: Trask, 1.
- Treatise on sedimentation: Twenhofel, 1.

SEDIMENTARY ROCK STRUCTURES.

- Mineralized spherulitic limestone: Allen, V. T., 7.
- Cone-in-cone: Broadhead, 141.
- Septaria from Pennsylvanian shale near St. Louis: Grawe, 1.
- Huge quartz geode: Grinstead, 1.
- What is a geode: Haskins, 1.
- Stylolites of Burlington-Keokuk formation at Springfield: Hayes, 1.
- Cave pearls near Columbia: Keller, 3.
- Varve-like deposit in a solution channel: Keller, 6.
- Nature of cone-in-cone: Keyes, 26.
- Collecting geodes in Missouri: O'Brien, 1.
- Additional notes on geodes: Robertson, P., 7.
- Oolitic rock of secondary origin: Swartzlow, 1.
- Further evidence for secondary oolites: Swartzlow, 5.
- Septarian concretions from northwestern Missouri: Swartzlow, 5.
- Stylolites in quartzite: Tarr, 4.
- Siliceous oolites in shale: Tarr, 9.
- Notes on concretions: Tarr, 15.
- Syngenetic origin of concretions in shale: Tarr, 19.
- Cone-in-cone: Tarr, 20.
- Chert and flint; concretions; cone-in-cone: Tarr, 30, 31.
- Treatise on sedimentation: Twenhofel, 1.
- Cyclical sedimentation of the Pennsylvanian Period: Weller, J. M., 3, 5, 6.
- Pennsylvanian overlap in United States: Weller, J. M., 7.
- Variations in Pennsylvanian sedimentary environment: Weller, J. M., 12.
- Pennsylvanian cyclothems: Weller, J. M., 13; Wanless, 1.
- Famous mineral localities, the Keokuk geode region: Wherry, 2.

Stratigraphy



ALEXANDRIAN SERIES.

- Complexity of Alexandrian series: Keyes, 75.
- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- Alexandrian series of Illinois and Missouri: Savage, T. E., 3, 4, 5.

ALGONKIAN SYSTEM. Refer to PRE-CAMBRIAN.

ALTAMONT LIMESTONE.

- Geology of Missouri: Branson, 52.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Traverse of upper Des Moines and lower Missouri series: Cline, 4.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Geology of northwestern Missouri: McQueen, 12.

AMAZONIA LIMESTONE.

- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

ARCHEAN SYSTEM. Refer to PRE-CAMBRIAN.

ARCHIMEDES LIMESTONE. Now called WARSAW.

- Geology of Lincoln Co.: Potter, W. B., 1.
- Second annual report Geological Survey of Missouri: Swallow, 2.

ARDMORE COAL HORIZON.

- Report on the Bevier Sheet: Gordon, 3.

ARDMORE LIMESTONE.

- Geology of Missouri: Branson, 52.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Traverse of upper Des Moines and lower Missouri series: Cline, 4.
- Report on the Bevier Sheet: Gordon, 3.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

ARGENTINE LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Geology of northwestern Missouri: McQueen, 12.
- Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Geology of Johnson and Miami Cos., Kansas: Newell, 1.

ASHERVILLE ALLUVIUM.

- Geology of Stoddard Co.: Farrar, 3.

ASHLAND LIMESTONE.

- Devonian of northeastern Missouri: Branson, 51.
- Geology of Missouri: Branson, 52.
- Kansas Geological Society 15th annual field conference guidebook: Kansas Geological Society, 6.

ATCHISON SHALES. Now called WA-BAUNSEE and SHAWNEE in part.

- Synonymy of Broadhead's Atchison shales: Keyes, 98, 156, 157.

AUBURN CHERT.

- Kimmswick and Plattin limestones of northeast Missouri: Foerste, 1.
- Geology of Pike Co.: Rowley, 24.

AUBURN SHALE.

- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Nebraska: Moore, R. C., 3A.
- Pennsylvanian system in Nebraska: Condra, 1.

AUGUSTA LIMESTONE. Now called OSAGE and MERAMEC in part.

- Geology of the Clinton Sheet: Marbut, 5.
- Geology of Greene Co.: Shepard, E. M., 2.
- Osage vs. Augusta: Weller, S., 7.

AUX VASES SANDSTONE. Refer also to FERRUGINOUS SANDSTONE.

- Geology of Missouri: Branson, 52.
- Sand and gravel resources of Missouri: Duke, 8.
- Principal Mississippian section: Keyes, 3.

Diastrophic aspect of Aux Vases sandstone: Keyes, 80.

Aux Vases vs. Ferruginous sandstone: Keyes, 107.

Aux Vases in basidium function: Keyes, 116.

Geology of Ste. Genevieve Co.: Weller, S., 27.

AVOCA LIMESTONE.

Pennsylvanian system in Nebraska: Condra, 1.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

BACKWATER CREEK SHALE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

BAILEY LIMESTONE. Refer also to LOWER HELDERBERG and DELTHYRIS.

Geology of Missouri: Branson, 52.

Devonian of southeastern Missouri: Croneiss, 4.

Bailey limestone of southeastern Missouri: Keyes, 118.

Fauna and correlation of the Bailey limestone: Tansey, 1.

Devonian correlations in Illinois and surrounding states; a summary: Weller, J. M., 18.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

BAINBRIDGE LIMESTONE. Refer also to NIAGARA.

Type section of the Bainbridge: Ball, J. R., 4, 11.

Correlation to Henryhouse of Oklahoma: Ball, J. R., 9.

Geology of Missouri: Branson, 52.

Quarrying industry of Missouri: Buckley, 5.

Bainbridge limestone of Missouri in synonymy: Keyes, 131A.

Revision of the Paleozoic systems: Ulrich, 21.

Geology of Ste. Genevieve Co.: Weller, S., 27.

BANDERA SHALE.

Stratigraphy and paleontology of the upper Carboniferous rocks of the Kansas section: Adams, G. I., 1A.

Geology of Missouri: Branson, 52.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Traverse of the upper Des Moines and lower Missouri series: Cline, 4.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

BARTLESVILLE SAND.

Geology of the Blue Springs gas field: Bartle, 1.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Oil and gas pools of western Missouri: Greene, F., 4.

BATESVILLE SANDSTONE.

Geology of Missouri: Branson, 52.

Geology of the Cassville Quadrangle: Clark, E. L., 3A.

Eureka Springs-Harrison Folio: Purdue, 2.

BEAUVAIS SANDSTONE.

Devonian of Missouri: Branson, 12.

Geology of Missouri: Branson, 52.

Devonian of southeastern Missouri: Croneiss, 4.

Sand and gravel resources of Missouri: Dake, 8.

Devonian correlations in Illinois and adjoining states; a summary: Weller, J. M., 18.

Geology of Ste. Genevieve Co.: Weller, S., 27.

BEDFORD COAL HORIZON.

Coal deposits of Missouri: Hinds, 4.

BELTON SANDSTONE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

BETHANY FALLS LIMESTONE. Refer also to BETHANY LIMESTONE.

Geology of the Blue Springs gas field: Bartle, 1.

Geology of Missouri: Branson, 52.

Coal measures in Missouri: Broadhead, 3.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Geology of Jackson Co.: McCourt, 1.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

BETHANY LIMESTONE. Now called BETHANY FALLS.

Bethany limestone at Bethany, Missouri: Bain, 3.

Bethany limestone of western coal fields: Keyes, 23.

Unconformable relation of Bethany limestones: Keyes, 99.

Taxonomic example of Bethany limestone: Keyes, 101.

- Bethany solidarity: Keyes, 114.
 Sub-Bethany unconformity: Keyes, 139.
 Proper use of the geological name Bethany: Tilton, 1.
- BEVIER COAL HORIZON.**
 Geology of Missouri: Branson, 52.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Report on the Bevier Sheet: Gordon, 3.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 Coal deposits of Missouri: Hinds, 4.
 Geology of the Huntsville Quadrangle: Marbut, 6.
 Geology of northwestern Missouri: McQueen, 12.
- BIEL LIMESTONE.**
 Geology of northwestern Missouri: McQueen, 12.
- BIG SPRINGS LIMESTONE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- BLACKJACK CREEK LIMESTONE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Geology of the fire clay district of east central Missouri: McQueen, 16.
- BLACK RIVER—BIRD'S EYE LIMESTONE.**
 Now called PLATTIN.
 General geology of Missouri: Broadhead, 35.
 Geology of Lincoln Co.: Potter, W. B., 1.
 Second annual report Geological Survey of Missouri: Swallow, 2.
- BLOCK LIMESTONE.**
 Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- BOLIN CREEK SANDSTONE.** Now called ROUBIDOUX.
 Geology of Miller Co.: Ball, S. H., 1.
- BONNER SPRINGS SHALE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- BONNETERRE DOLOMITE.** Refer also to FREDERICKTOWN, ST. JOSEPH, and TOM SAUK.
 Geology of Missouri: Branson, 52.
 Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
 Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
 Occurrence of dolomite in the Fredericktown area: McQueen, 15.
 Copper deposits of Missouri: Bain, 13.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
 Insoluble residues of the Bonneterre dolomite: Wood, H. B., 1.
- BOONE FORMATION.**
 Fayetteville Folio: Adams, G. I., 3.
 Geology of Missouri: Branson, 52.
 Boone chert: Giles, 1.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Joplin District Folio: Smith, W. S. T., 2A.
- BOWLING GREEN LIMESTONE.**
 Carboniferous formations of the Ozark region: Keyes, 38.
 Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- BRASSFIELD LIMESTONE.**
 Stratigraphy of lower Silurian of lower Mississippi Valley: Ball, J. R., 11A.
 Geology of Perry and Cape Girardeau Cos.: Flint, 3, 4.
- BRUSHY HILL COAL HORIZON.**
 Coal deposits of Missouri: Hinds, 4.
- BURGESS SAND.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- BURLINGAME LIMESTONE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

BURLINGTON LIMESTONE. Refer also to ENCRINITAL.

- Geology of Missouri: Branson, 52.
- Lime and cement resources of Missouri: Buehler, 1.
- General geology of Missouri: Broadhead, 35.
- Subsurface geology of northeast Missouri: Grohskopf, 3.
- Naming of Burlington limestone: Keyes, 102.
- Burlington limestone of southwestern Ozarks: Keyes, 121.
- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- Stratigraphy of the northern extension of the Burlington limestone in Missouri and Iowa: Laudon, 2.
- Geology of Morgan Co.: Marbut, 15.
- Early Mississippian formations in Missouri: Moore R. C., 2.
- Description of Carboniferous rocks of Iowa: Owen, D. D., 5.
- Geology of Pike Co.: Rowley, 24.
- Geology of Ste. Genevieve Co.: Weller, S., 27.
- General geology of Illinois: Worthen, A. H., 13A.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

BUSHBERG SANDSTONE.

- Lower Mississippian of Missouri: Branson, 38.
- Geology of Missouri: Branson, 52.
- Quarrying industry of Missouri: Buckley, 5.
- Early Mississippian formations of Missouri: Moore, R. C., 2.
- Petrography of the Bushberg sandstone: Smith, W. C., 1.
- Geology of Ste. Genevieve Co.: Weller, S., 27.

CALHOUN LIMESTONE. Now called DEER CREEK LIMESTONE.

- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

CALHOUN SHALE.

- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

CALLAWAY LIMESTONE. Refer also to HAMILTON.

- Devonian of Missouri: Branson, 12.
- Geology of Missouri: Branson, 8, 52.
- Paleontology of Missouri, part 2: Keyes, 9.

Characteristics of the Ozark Mountains: Keyes, 12.

Callaway limestone in Iowa: Keyes, 122.

Subsurface geology of northeast Missouri: Grohskopf, 3.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

CAMBRIAN SYSTEM.

- Correlation of upper Cambrian of Missouri and Texas: Bridge, 8.
- Correlation of the Cambrian of North America: Howell, B. F., 1.
- Cambrian and the Ozark series: Broadhead, 121.
- Cambro-Silurian question: Keyes, 13.
- Cambrian formations of the St. Francois Mountains: Keyes, 52.
- Cambrian in Missouri and classification of the Ozark series: Winslow, 11.

CANADIAN SYSTEM.

- Revision of the Paleozoic systems: Ulrich, 21.
- Ozarkian and Canadian section: Ulrich, 31.
- Correlation in early Paleozoic: Ulrich, 33, 35.

CANVILLE LIMESTONE.

- Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

CAP AU GRES SANDSTONE. Now called ST. PETER.

- Carboniferous formations of the Ozark region: Keyes, 38.

CAPE GIRARDEAU LIMESTONE. Now called GIRARDEAU.

- General geology of Missouri: Broadhead, 35.
- Second annual report Geological Survey of Missouri: Swallow, 2.

CAPTAIN CREEK LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Geology of Johnson and Miami Cos., Kansas: Newell, 1.

CARBONIFEROUS SYSTEM. Refer also to MISSISSIPPIAN, PENNSYLVANIAN and COAL MEASURES.

- Carboniferous outlier in Lawrence Co.: Albertson, 1.

- Carboniferous on the north side of Ozarks: Bass, S. H., 2.
 Source of Ozark sandstones: Bowles, 1.
 Iron ores of Carboniferous age: Broadhead, 57, 83.
 Rocks of southeast Kansas: Broadhead, 95.
 Carboniferous of eastern Kansas: Broadhead, 109.
 Carboniferous rocks of St. Louis and vicinity: Englemann, 1.
 Lower Carboniferous system in southern Illinois: Englemann, 3.
 Carboniferous limestone: Hall, 4, 5.
 Chert rocks of sub-Carboniferous: Haworth, 1.
 Stratigraphy and correlation of Carboniferous formations: Haworth, 11.
 Classifications of lower Carboniferous: Keyes, 2.
 Basal line of delimitation of Carboniferous: Keyes, 5.
 Nomenclature of Carboniferous: Keyes, 22.
 Über das Carbon des Mississippi thales: Keyes, 24.
 Relation of Devonian to Carboniferous: Keyes, 31.
 Carboniferous formations: Keyes, 36, 38.
 Geological position of trans-Mississippi coals: Keyes, 47, 71.
 Carboniferous terrane: Keyes, 54.
 Standard for American Carboniferous: Keyes, 55.
 Clarinda well section: Keyes, 60.
 Classification of Carboniferous deposits: Keyes, 66, 74.
 Homogeny in Carbonic stratigraphy: Keyes, 95.
 Upper Carboniferous of southwestern Iowa: Lonsdale, 3.
 "Carboniferous" rocks of North America: Moore, R. C., 3D.
 Carboniferous rocks of Iowa, etc.: Owen, D. D., 5.
 Permo-Carboniferous orogeny: Van der Gracht, 1, 2.
 Last submersion and emergence from Carboniferous seas: West, E. P., 3.
 Devonian and Carboniferous: Williams, H. S., 2.
 Stratigraphic sections and faunules of some western Carboniferous formations: Williams, J. S., 6.
 Remarks on Carboniferous rocks of eastern Kansas and Nebraska: Worthen, 2.
- CARTERVILLE FORMATION.**
 Geology of Missouri: Branson, 8, 52.
 Joplin District Folio. Smith, W. S. T., 2A.
- CARTHAGE LIMESTONE.** Now called OSAGE in part.
 Structural and economic geology of Missouri: Gallaher, J. A., 2.
- CEDAR VALE SHALE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- CEDAR VALLEY LIMESTONE.**
 Missouri equivalent of Cedar Valley limestone: Keyes, 134.
- CEMENT CITY LIMESTONE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- CHANUTE SHALE.**
 Geology of the Blue Springs gas field: Bartle, 1.
 Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- CHATTANOOGA SHALE.** Refer also to EUREKA and NOEL.
 Geology of Missouri: Branson, 52.
 The Fortune, a new Devonian formation in southwest Missouri: Grohskopf, 6.
 Age of Chattanooga black shale: Keyes, 115H.
 Early Mississippian formations in Missouri: Moore, R. C., 2.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Chattanooga series and Ohio shale: Ulrich, 20.
 Kinderhookian age of the Chattanooga series: Ulrich, 22.
- CHELTENHAM FIRE CLAY.**
 The Cheltenham clay of Missouri: Allen, V. T., 10.
 Geology of Missouri: Branson, 52.

Geology of the St. Louis Quadrangle: Fenneman, 4.

Geologic relations of Diaspore and Flint fire clays of Missouri: McQueen, 4.

Geology of the fire clay districts of east central Missouri: McQueen, 16.

Clay deposits of Missouri: Wheeler, H. A., 7.

CHEROKEE FORMATION. Refer also to KNOB NOSTER.

Geology of the Blue Springs gas field: Bartle, 1.

Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.

Geology of Vernon Co.: Greene, F. C., 3.

Oil and gas pools of western Missouri: Greene, F. C., 4.

Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Geology of Leavenworth-Smithville Quadrangles: Hinds, 6.

Geology of Jackson Co.: McCourt, 1.
Eureka Springs-Harrison Folio: Purdue, 2.

CHEROKEE GROUP.

Geology of Missouri: Branson, 52.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Traverse of upper Des Moines and lower Missouri series: Cline, 4.

Stratigraphy and ostracode distribution of Cherokee and Henrietta formations: Davies, 4.

Subsurface geology of northeast Missouri: Grohskopf, 3.

Pre-occupation of Cherokee title in Missouri: Keyes, 153.

Basal Cherokee in Rolla area: Murphy, 1.

CHERRYVALE SHALE.

Geology of the Blue Springs gas field: Bartle, 1.

Geology of Missouri: Branson, 52.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.

Geology of Jackson Co.: McCourt, 1.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Geology of Johnson and Miami Cos., Kansas: Newell, 1.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

CHESTER GROUP.

The Chester controversy: Ulrich, 23.

Formations of the Chester: Ulrich, 24, 25.

Stratigraphy of the Chester group: Weller, S., 21.

Stratigraphic and faunal succession of the Chester group: Weller, S., 25.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

Remarks on the discovery of a terrestrial flora in the Mountain limestone of Illinois: Worthen, A. H., 1A.

Geology of Illinois: Worthen, A. H., 6.

CHESTER SANDSTONE. Now called PALESTINE.

Quaternary deposits of Missouri: Swallow, 7.

Geology of Hardin Co., Illinois: Weller, S., 26A.

CHOUTEAU LIMESTONE.

Geology of Miller Co.: Ball, S. H., 1.

Lower Mississippian of Missouri: Branson, 38.

General geology of Missouri: Broadhead, 35; Branson, 52.

Chouteau formation of east central Missouri: Connolly, 1.

Subsurface geology of northeast Missouri: Grohskopf, 3.

Structural reconnaissance of the Mississippi Valley area: Krey, 1.

Original Chouteau limestone: Keyes, 76.

Kinship remoteness of Chouteau and Louisiana limestone: Keyes, 162.

Chouteau group of eastern Missouri: Rowley, 1.

Geology of Pike Co.: Rowley, 24.

Second annual report Geological Survey of Missouri: Swallow, 2.

CLAY CREEK LIMESTONE.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

CLAYTON FORMATION.

Geology and bleaching clays of southeast Missouri: Farrar, 2.

Geology of Stoddard Co.: Farrar, 3.

Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.

CLEAR CREEK LIMESTONE.

Quarrying industry of Missouri: Buckley, 5.

Validity of Clear limestone as formational title in Missouri: Keyes, 127.

Grand Tower formation, and its relation to the Jeffersonville beds of Indiana: Savage, T. E., 2.

- Devonian rocks of Illinois: Savage, T. E., 8.
- Remarks on the discovery of a terrestrial flora in the Mountain limestone of Illinois: Worthen, A. H., 1A.
- CLEAR CREEK SANDSTONE.**
Topographic features of the southwestern coal field: Broadhead, 39.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of Vernon Co.: Greene, 3.
- COAL CITY LIMESTONE.**
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Subsurface geology of northeast Missouri: Grohskopf, 3.
- COAL CREEK LIMESTONE.**
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- COAL MEASURES.** Now called PENNSYLVANIAN.
Coal measure shale in Miller Co.: Ball, S. H., 1.
Lower Coal Measures: Broadhead, 20.
Middle Coal Measures: Broadhead, 21.
Upper Coal Measures: Broadhead, 22.
General geology of Missouri: Broadhead, 35.
Thickness of the Coal Measures: Broadhead, 78.
Coal Measures of Missouri: Broadhead, 123.
Stratigraphic equivalents of Coal Measures of Arkansas: Keyes, 39.
Formational synonymy of Coal Measures: Keyes, 49, 50.
Horizons of Arkansas and Indian Territory coal compared with other trans-Mississippi: Keyes, 53.
Names of coals west of Mississippi River: Keyes, 56.
Hiatus at base of Coal Measures: Keyes, 58.
Correlation of Coal Measures of southwest Missouri: Keyes, 150.
Marine anomaly of Missourian Coal Measures: Keyes, 164.
Coal Measures of Jasper Co.: Norwood, C. J., 2.
Coal Measures of Howard Co.: Norwood, C. J., 4.
Coal Measures of Pike Co.: Rowley, 5.
Second annual report Geological Survey of Missouri: Swallow, 2.
Coal Measures shale and coal in Moniteau Co.: Van Horn, F. B., 1.
- Age of lower coals of Henry Co.: White, C. D., 3.
Coal Measures of Missouri: Winslow, 8, 12.
- COLE CAMP SANDSTONE.** Now called GUNTER.
Copper deposits of Missouri: Bain, 11, 13.
Geology of Moniteau Co.: Van Horn, F. B., 1.
Lead and zinc deposits of Missouri: Winslow, 14.
- COMMERCE SANDSTONE.**
Sand and gravel resources of Missouri: Dake, 8.
Evolution of the north part of the lowlands of southeast Missouri: Marbut, 10.
- COMPTON LIMESTONE.** Refer also to KINGS and SAC.
Geology of Missouri: Branson, 52.
Compton limestone in southwest Missouri: Grohskopf, 6.
Early Mississippian formations in Missouri: Moore, R. C., 2.
- COOPER LIMESTONE.** Refer also to ONONDAGA.
Devonian of Missouri: Branson, 8, 10, 11, 12, 52.
Devonian of central Missouri: Greger, 18.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- COTTER FORMATION.** Refer also to WINFIELD.
Geology of Missouri: Branson, 52.
Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
Lower Ordovician stratigraphy: Cullison, 5.
Sandstone members of Cotter formation: Grawe, 3.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
Eureka Springs-Harrison Folio: Purdue, 2.
Geology of Ste. Genevieve Co.: Weller, S., 27.
- CRAGHEAD CREEK SHALE.** Now called SNYDER CREEK.
Devonian of Missouri: Branson, 12, 52.
Devonian of central Missouri: Greger, 7.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

CRETACEOUS SYSTEM.

- Geology of Missouri: Branson, 52.
- Cretaceous of Kentucky, Illinois and Missouri: Lamar, 1.
- Cretaceous, southeast Missouri: Lonsdale, 1.
- Cretaceous sediments in Crowley's Ridge: Mather, 1.
- Cretaceous of the upper Missouri, 1841: Nicollet, 2.
- Stratigraphy of upper Cretaceous: Stephenson, 2.
- Cretaceous (?) intrusives in Ste. Genevieve Co.: Weller, S., 27.

CRYSTAL CITY SANDSTONE. Now called ST. PETER.

- Lead and zinc deposits of Missouri: Winslow, 14.

CURZON LIMESTONE.

- Pennsylvanian system in Nebraska: Condra, 1.
- Correlation of the members of the Shawnee group: Condra, 4.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

CYRENE DOLOMITE.

- Geology of Missouri: Branson, 52.
- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- Alexandrian series in Missouri and Illinois: Savage, T. E., 3.

DAVIS FORMATION.

- Iron ores of Missouri: Crane, G. W., 1.
- Geology of Missouri: Branson, 52.
- Lime and cement resources of Missouri: Buehler, 1.
- Geology and mineral deposits of the Ozark region: Buehler, 9.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Subsurface geology of northeast Missouri: Grohskopf, 3.
- Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
- Geology of Ste. Genevieve Co.: Weller, S., 27.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

DAWSON COAL HORIZON.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

DECATURVILLE LIMESTONE.

- Copper deposits of Missouri: Bain, 11.
- Geology of the Ha Ha Tonka district: Scherer, 1.
- Table of geological formations: Shepard, E. M., 4.

DECORAH SHALE.

- Geology of Missouri: Branson, 52.
- Subsurface geology of northeast Missouri: Grohskopf, 3.
- Stratigraphy of the Decorah formation: Kay, G. M., 1.
- Geology of the Fire Clay district of east central Missouri: McQueen, H. S., 16.
- Kansas Geological Society 15th annual field conference guidebook: Kansas Geological Society, 6.
- Geology of Ste. Genevieve Co.: Weller, S., 27.

DEDERICK SHALE.

- Geology of Vernon Co.: Greene, 3.

DEER CREEK LIMESTONE. Refer also to CALHOUN.

- Pennsylvanian system in Nebraska: Condra, 1.
- Geologic cross section, Forest City, Missouri to Du Bois, Nebraska: Condra, 3.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

DELTHYRIS SHALY LIMESTONE. Now called BAILEY.

- Second annual report Geological Survey of Missouri: Swallow, 2.

DENNIS LIMESTONE.

- Stratigraphy and paleontology of upper Carboniferous rocks of Kansas: Adams, G. I., 1A.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Geology of Johnson and Miami Cos., Kansas: Newell, 1.

DERBY FORMATION. Refer also to ELVINS.

- Geology of Missouri: Branson, 52.
- Iron ores of Missouri: Crane, G. W., 1.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Subsurface geology of northeast Missouri: Grohskopf, 3.
- Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
- Geology of Ste. Genevieve Co.: Weller, S., 27.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

DES MOINES SERIES.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Correlation of Des Moines series of southwest Iowa and northwest Missouri: Cline, 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Vernon Co.: Green, F. C., 3.
 Stages of the Des Moines series: Keyes, 33.
 Discordance of Missourian series upon Des Moines: Keyes, 97.
 Geology of northwestern Missouri: McQueen, 12.
 Upper Des Moinesian and lower Missourian rocks: Oakes, 1.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

DEVONIAN SYSTEM.

- Devonian in Missouri: Branson, 6, 11, 12, 18, 47.
 Correlation of Devonian in Illinois and Missouri: Branson, 51; Cooper, G. A., 1; Croneis, 4; Weller, J. M., 18.
 Devonian-Mississippian contact: Branson, 16, 44.
 Devonian outlier near crest of Ozarks: Bridge, 3.
 Devonian of north Missouri: Broadhead, 125.
 Correlation of Devonian formations of North America: Cooper, G. A., 1A.
 Devonian of Boone County: Decker, 1.
 Stratigraphy and correlations of the Devonian of western Tennessee: Dunbar, 1.
 Devonian of central Missouri: Gregor, 7, 12, 17, 18.
 Devonian stratigraphy: Gregor, 9.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 Heavy accessory minerals of Devonian sandstones of southern Missouri: Gruner, 1.
 Devonian and associated rocks of Cole and Moiteau Cos.: Hall, R. H., 1.
 Devonian of southwestern Missouri: Hersey, 1, 3.
 Relation of Devonian and Carboniferous: Keyes, 31.
 Devonian interval: Keyes, 62.
 Devonian outliers: Keyes, 84.
 Merging of Devonian and Silurian periods: Keyes, 89A.
 Revision of Devonian of Missouri: Keyes, 138.
 Intra-Devonian erosional unconformity in Missouri: Keyes, 147.
 Easternmost extension of western Devonian limestones: Keyes, 161.

- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 Geology of Morgan Co.: Marbut, 15.
 Devonian system in Arkansas and Oklahoma: Miser, 1.
 Devonian of Ralls Co.: Moore, G. P., 1.
 Geology of Pike Co.: Rowley, 24.
 Devonian formations of Illinois: Savage, 8-11.
 Paleogeography of the Devonian: Schuchert, 20.
 Devonian system of Iowa: Stainbrook, 1.
 Post-Devonian igneous intrusion: Tarr, 34.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Former extension of Devonian formations in southeastern Missouri: Weller, S., 26.
 Devonian and Carboniferous: Williams, H. S., 2.

DOE RUN FORMATION. Refer also to ELVINS.

- Geology of Missouri: Branson, 52.
 Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
 Lime and cement resources of Missouri: Buehler, 1.
 Iron ores of Missouri: Crane, G. W., 1.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
 Superfluity of Doe Run title in Missouri: Keyes, 145.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

DONIPHAN SHALE.

- Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

DOUGLAS FORMATION.

- Pennsylvanian system in Nebraska: Condra, 1.
 Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Leavenworth-Smithville Folio: Hinds, 6.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

DOUGLAS GROUP.

Geology of Missouri: Branson, 52.
 Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.

DOVER LIMESTONE.

Pennsylvanian system in Nebraska:
 Condra, 1.
 Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.

DRUM LIMESTONE.

Stratigraphy and paleontology of the
 Carboniferous system of the Kansas
 section: Adams, G. I., 1A.
 Geology of Missouri: Branson, 52.
 Pennsylvanian stratigraphy of Mis-
 souri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri:
 Wilson, M. E., 2.

DRY SHALE.

Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.

DU BOIS LIMESTONE.

Pennsylvanian system in Nebraska:
 Condra, 1.
 Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.

DUTCHTOWN FORMATION.

Geology of Missouri: Branson, 52.
 Dutchtown, Ordovician formation of
 southeastern Missouri: McQueen, 10.

EDGEWOOD LIMESTONE.

Geology of Missouri: Branson, 52.
 Structural reconnaissance of the Mis-
 sissippi Valley area: Krey, 1.
 Edgewood limestone of Pike Co.: Row-
 ley, 25.
 Alexandrian series in Illinois and Mis-
 souri: Savage, T. E., 4, 5, 5A.
 Occurrence of oil and gas in Missouri:
 Wilson, M. E., 2.

EDWARDS COAL HORIZON.

Report on the Higginsville Sheet: Wins-
 low, 5.

ELMO COAL HORIZON.

Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Mis-
 souri: Hinds, 5.

ELMONT LIMESTONE.

Pennsylvanian system in Nebraska:
 Condra, 1.
 Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.

ELVINS GROUP. Refer also to **DERBY**,
DOERUN, **DAVIS**, **FREDERICKTOWN**,
and **POTOSI SLATES** and **CONGLOMERATES**.

Geology of the disseminated lead de-
 posits of St. Francois and Wash-
 ington Cos.: Buckley, 22.
 Individuality of Cambrian Elvins:
 Keyes, 149.
 Revision of the Paleozoic systems: Ul-
 rich, 21.

EMINENCE DOLOMITE.

Geology of Missouri: Branson, 8, 52.
 Geology of the Eminence-Cardareva
 Quadrangles: Bridge, 6.
 Geology of the disseminated lead de-
 posits of St. Francois and Washing-
 ton Cos.: Buckley, 22.
 Geology and mineral deposits of the
 Ozark region: Buehler, 9.
 Geology of the Potosi-Edgehill Quad-
 rangles: Dake, 15.
 Subsurface geology of northeast Mis-
 souri: Grohskopf, 3.
 Insoluble residues as a guide in strati-
 graphic studies: McQueen, 5.
 Revision of the Paleozoic systems: Ul-
 rich, 21.
 Geology of Ste. Genevieve Co.: Wel-
 ler, S., 27.
 Occurrence of oil and gas in Missouri:
 Wilson, M. E., 2.

EMPORIA LIMESTONE.

Geology of northwestern Missouri:
 McQueen, 12.

ENCRINITAL LIMESTONE. Now called
BURLINGTON-KEOKUK.

Geology of Lincoln Co.: Potter, W. B.,
 1.
 Second annual report Geological Sur-
 vey of Missouri: Swallow, 2.

ERVINE CREEK LIMESTONE.

Pennsylvanian system in Nebraska:
 Condra, 1.
 Correlation of members of Shawnee
 group in southeastern Nebraska and
 adjacent areas of Iowa, Missouri and
 Kansas: Condra, 4.
 Geology of northwestern Missouri:
 McQueen, 12.
 Pennsylvanian system in Kansas:
 Moore, R. C., 3A.

ESSEX LIMESTONE.

Alexandrian series in Illinois and Mis-
 souri: Savage, T. E., 4.

EUDORA SHALE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Correlation of Pennsylvanian beds in Nebraska: Condra, 2.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

EUREKA COAL HORIZON.

- Report on Bevier Sheet: Gordon, 3.
 Coal deposits of Missouri: Hinds, 4.

EUREKA SHALE. Now called CHATTA-NOOGA.

- Geology of Greene Co.: Shepard, E. M., 2.

EVERTON FORMATION.

- Sand and gravel resources of Missouri: Dake, 8.
 Problem of the St. Peter sandstone: Dake, 9.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 Everton in southeast Missouri: McQueen, 10.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Geology of Ste. Genevieve Co.: Weller, S., 27.

EXLINE LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.

FARLEY LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

FAYETTEVILLE FORMATION.

- Fayetteville Folio: Adams, G. I., 3.
 Geology of Missouri: Branson, 52.
 Geology of the Cassville Quadrangle: Clarke, E. L., 3A.

FERN GLEN FORMATION.

- Geology of Missouri: Branson, 52.
 Relation of Reeds Spring to Fern Glen formation: Gillerman, 1.
 Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.

Kinship of Fern Glen limestone of Missouri: Keyes, 115.

Invalidation of Fern Glen terrane: Keyes, 120.

Structural reconnaissance of the Mississippi Valley area: Krey, 1.

Early Mississippian formations in Missouri: Moore, R. C., 2.

Revision of the Paleozoic systems: Ulrich, 21.

Faunal zones in Mississippian section: Weller, S., 26A.

Geology of Ste. Genevieve Co.: Weller, S., 27.

FERNVALE LIMESTONE.

- Geology of Missouri: Branson, 52.
 Insoluble residues as a guide in stratigraphic studies: McQueen, H. S., 5.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Fernvale correlations: Shideler, 1.
 Geology of Ste. Genevieve Co.: Weller, S., 27.

FERRUGINOUS SANDSTONE. Now called AUX VASES.

- General geology of Missouri: Broadhead, 35.
 Geology of Lincoln Co.: Potter, W. B., 1.
 Second annual report Geological Survey of Missouri: Swallow, 2.

FIRST MAGNESIAN LIMESTONE. Now called JOACHIM.

- General geology of Missouri: Broadhead, 35.
 Geology of Lincoln Co.: Potter, W. B., 1.
 Second annual report Geological Survey of Missouri: Swallow, 2.

FIRST SANDSTONE. Now called St. PETER.

- General geology of Missouri: Broadhead, 35.

FONTANA SHALE.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

FORT SCOTT LIMESTONE. Refer also to OSWEGO.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

FORTUNE FORMATION.

Geology of Missouri: Branson, 52.
 Geology of the Cassville Quadrangle: Clark, E. L., 3A.
 The Fortune, a new Devonian formation in southwest Missouri: Grohskopf, 6.

FOURTH MAGNESIAN LIMESTONE.

Includes everything from top of BONNETERRE to top of EMINENCE.

General geology of Missouri: Broadhead, 35.
 Second annual report Geological Survey of Missouri: Swallow, 2.

FREDERICKTOWN LIMESTONE.

Includes ELVINS GROUP AND BONNETERRE.

Report on Mine La Motte Sheet: Keyes, 29.

FRIEDRICH SHALE.

Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

FRISBIE LIMESTONE.

Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

GALESBURG SHALE.

Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

GASCONADE DOLOMITE.

Refer also to OSAGE and THIRD MAGNESIAN.

Geology of Miller Co.: Ball, S. H., 1.
 Geology of Missouri: Branson, 52.

Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.

Geology of the Potosi-Edgehill Quadrangles: Dake, 15.

Subsurface geology of northeast Missouri: Grohskopf, 3.

Geology of the Rolla Quadrangle: Lee, W., 2.

Insoluble residues as a guide in stratigraphic studies: McQueen, 5.

Geology of Morgan County: Marbut, 15.

Iron ores of Missouri: Nason, 2.

Revision of the Paleozoic systems: Ulrich, 21.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Lead and zinc deposits of Missouri: Winslow, 14.

GIRARDEAU LIMESTONE.

Refer also to CAPE GIRARDEAU.

Geology of Missouri: Branson, 52.
 Quarrying industry of Missouri: Buckley, 5.

Alexandrian series in Missouri and Illinois: Savage, T. E., 3, 4.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

GLEN DEAN LIMESTONE.

Geology of Missouri: Branson, 52.
 Geology of Perry and Cape Girardeau Cos.: Flint, 2, 4.

GLEN PARK LIMESTONE.

Lower Mississippian of Missouri: Branson, 38, 52.
 Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.
 Early Mississippian formations of Missouri: Moore, R. C., 2.
 Geology of Ste. Genevieve Co.: Weller, S., 27.

GOLCONDA FORMATION.

Geology of Missouri: Branson, 52.
 Geology of Perry and Cape Girardeau Cos.: Flint, 3, 4.
 Geology of Ste. Genevieve Co.: Weller, S., 27.

GRAND FALLS CHERT.

Geology of Missouri: Branson, 52.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Joplin District Folio: Smith, W. S. T., 2A.
 Lead and zinc deposits of Missouri: Winslow, 14.

GRAND TOWER LIMESTONE.

Geology of Missouri: Branson, 52.
 Quarrying industry in Missouri: Buckley, 5.
 Paleontology of Missouri, part 1: Keyes, 8.

- Grand Tower formation of Illinois: Savage, 2, 8.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- GRASSY CREEK SHALE.**
 Geology of Missouri: Branson, 8, 52.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 Carboniferous formations of the Ozark region: Keyes, 38.
 Eral affiliations of Grassy black shale: Keyes, 79A.
 Early Mississippian formations in Missouri: Moore, R. C., 2.
 Grassy Creek shale: Weller, J. M., 14.
- GRAYDON SANDSTONE.**
 Graydon sandstone and its mineral waters: Babcock, 1.
 Geology of Miller Co.: Ball, S. H., 1.
 Geology of Missouri: Branson, 52.
 Geology of the Fire Clay district of east central Missouri: McQueen, 16.
 Geology of Morgan Co.: Marbut, 15.
 Geology of Greene Co.: Shepard, E. M., 2, 8.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Lead and zinc deposits of Missouri: Winslow, 14.
- GULF SERIES.**
 Geology of Stoddard Co.: Farrar, 2.
 Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.
- GUNTER SANDSTONE.** Refer also to **COLE CAMP** and **THIRD SANDSTONE.**
 Geology of Miller Co.: Ball, S. H., 1.
 Geology of Missouri: Branson, 52.
 Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
 Sand and gravel resources of Missouri: Dake, 8.
 Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
 Geology of Morgan Co.: Marbut, 15.
- HALE SANDSTONE.**
 Fayetteville Folio: Adams, G. I., 3.
 Geology of Missouri: Branson, 52.
 Geology of the Cassville Quadrangle: Clark, E. L., 3A.
 Eureka Springs-Harrison Folio: Purdue, 2.
- HAMILTON GROUP.** Now called **CALLAWAY** and **SNYDER CREEK.**
 General geology of Missouri: Broadhead, 35; Branson, 52.
 Lime and cement resources of Missouri: Buehler, 1.
 Geology of Lincoln Co.: Potter, W. B., 1.
- Geology of Pike Co.: Rowley, 24.
 Second annual report Geological Survey of Missouri: Swallow, 2.
- HANNIBAL SHALE.** Refer also to **VERMICULAR SANDSTONE** and **SHALE.**
 Lower Mississippian of Missouri: Branson, 38, 39, 52.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 Kansas Geological Society. 9th annual field conference guidebook: Kansas Geological Society, 3A.
 Principal Mississippian section: Keyes, 3.
 Membership of Hannibal shales: Keyes, 130.
 Structural reconnaissance of Mississippi Valley area: Krey, 1.
 Early Mississippian formations of Missouri: Moore, R. C., 2.
 Hannibal formation in Greene Co.: Park, 3.
 Geology of Pike Co.: Rowley, 24.
- HAPPY, HOLLOW LIMESTONE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HARTFORD LIMESTONE.**
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HARVEYVILLE SHALE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HASKELL LIMESTONE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HEEBNER SHALE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HENRIETTA FORMATION.** Refer also to **LEXINGTON GROUP.**
 Geology of Vernon Co.: Greene, F. C., 3.
 Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.

- Leavenworth-Smithville Folio: Hinds, 6.
Geology of Jackson Co.: McCourt, 1.
- HENRIETTA GROUP.**
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of lower Des Moines and upper Missouri series: Cline, 4.
Subsurface geology of northeast Missouri: Grohskopf, 3.
Stages of the Des Moines, etc.: Keyes, 18A.
Geology of northwestern Missouri: McQueen, 12.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- HERTHA LIMESTONE.**
Upper Carboniferous rocks of the Kansas section: Adams, G. I., 1A.
Geology of the Blue Springs gas field: Bartle, 1.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- HEUMADER SHALE.**
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HICKORY CREEK SHALE.**
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- HIGGINSVILLE LIMESTONE.**
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of the Fire Clay districts of east central Missouri: McQueen, 16.
- HINDSVILLE FORMATION.**
Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
Eureka Springs-Harrison Folio: Purdue, 2.
- HOLT SHALE.**
Pennsylvanian system in Nebraska: Condra, 1.
- Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- HONEY CREEK COAL HORIZON.**
Geology of the Calhoun Sheet: Marbut, 4.
Geology of the Clinton Sheet: Marbut, 5.
- HOUS LIMESTONE.**
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Geology of the Fire Clay districts of east central Missouri: McQueen, 16.
- HOWARD LIMESTONE.**
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- HUDSON RIVER SHALE.** Now called MAQUOKETA.
Lime and cement resources of Missouri: Buehler, 1.
Iron ores of Missouri: Crane, G. W., 1.
Geology of Lincoln Co.: Potter, W. B., 1.
Trenton limestone and Hudson River shales: Rowley, 6.
Geology of Pike Co.: Rowley, 24.
Second annual report Geological Survey of Missouri: Swallow, 2.
Lead and zinc deposits of Missouri: Winslow, 14.
- HUSHPUCKNEY SHALE.**
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- IATAN LIMESTONE.**
Geology of Missouri: Branson, 52.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Missouri series of the Carboniferous: Keyes, 44.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

INDIAN CAVE SANDSTONE.

- Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

IOLA LIMESTONE. Refer also to **PLATTSBURG GROUP.**

- Geology of the Blue Springs gas field: Bartle, 1.
 Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

IOWA POINT SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

IRON MOUNTAIN CONGLOMERATE.

- Lead and zinc deposits of Missouri: Winslow, 14, 20.

ISLAND CREEK SHALE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

JACKSON PARK SHALE.

- Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

JEFFERSON CITY FORMATION. Refer also to **SECOND MAGNESIAN.**

- Geology of Miller Co.: Ball, S. H., 1.
 Geology of Missouri: Branson, 52.
 Geology of Eminence-Cardareva Quadrangles: Bridge, 6.
 Lower Ordovician Stratigraphy of Ozarks: Cullison, 5.
 Revision of Jefferson City formation in Rolla Quadrangle: Cullison, 1.
 Sandstone members of Jefferson City formation: Grawe, 3.

Subsurface geology of northeastern Missouri: Grohskopf, 3.

Geology of the Rolla Quadrangle: Lee, W., 2.

Insoluble residues as a guide in stratigraphic studies: McQueen, 5.

Geology of Morgan Co.: Marbut, 15.

Revision of the Paleozoic systems: Ulrich, 21.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Lead and zinc deposits of Missouri: Winslow, 14.

JIM CREEK LIMESTONE.

- Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

JOACHIM FORMATION. Refer also to **FIRST MAGNESIAN.**

Copper deposits of Missouri: Bain, 13.
 Geology of Missouri: Branson, 52.

Quarrying industry of Missouri: Buckley, 5.

Subsurface geology of northeastern Missouri: Grohskopf, 3.

Structural reconnaissance of Mississippi Valley area: Krey, 1.

Geology of the Fire Clay districts of east central Missouri: McQueen, 16.

Geology of Moniteau Co.: Van Horn, F. B., 1.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

Lead and zinc deposits of Missouri: Winslow, 14.

JONES POINT SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

JORDAN COAL HORIZON.

Geology of the Calhoun Sheet: Marbut, 4.

Geology of the Clinton Sheet: Marbut, 5.

KANSAS CITY FORMATION.

Pennsylvanian system in Nebraska: Condra, 1.

Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Leavenworth-Smithville Folio: Hinds, 6.

Geology of Jackson Co.: McCourt, 1.

Occurrences of oil and gas in Missouri: Wilson, M. E., 2.

KANSAS CITY GROUP.

- Geology of Missouri: Branson, 52.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Subsurface geology of northeastern Missouri: Grohskopf, 3.
- Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
- Kansas City group in Taxonomy: Keyes, 121C.
- Fallacy of Kansas City group: Keyes, 146.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

KANWAKA SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

KEOKUK LIMESTONE. Refer also to ENCRINITAL.

- Mississippian of Mississippi Valley: Beachler, 1.
- Geology of Missouri: Branson, 52.
- Geology of the Cassville Quadrangle: Clark, E. L., 3A.
- Subsurface geology of northeastern Missouri: Grohskopf, 3.
- Remarks upon genus *Archimides* from Carboniferous limestone of Mississippi Valley: Hall, J., 6.
- Structural reconnaissance of Mississippi Valley area: Krey, 1.
- Early Mississippian formations of Missouri: Moore, R. C., 2.
- Carboniferous rocks of Iowa: Owen, D. D., 5.
- Keokuk limestone of Pike Co.: Rowley, 5, 24.
- Geodes of the Keokuk beds: Van Tuyl, 1.
- Geology of Ste. Genevieve Co.: Weller, S., 27.

KEREFORD LIMESTONE

- Pennsylvanian system in Nebraska: Condra, 1.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

KIMMSWICK LIMESTONE. Refer also to RECEPTACULITE, TRENTON and PROSER.

- Stratigraphy of the Kimmswick limestone of Illinois and Missouri: Bradley, J. H., 1.

- Geology of Missouri: Branson, 52.
- Quarrying industry of Missouri: Buckley, 5.
- Lime and cement resources of Missouri: Buehler, 1.
- Kimmswick limestone of northeastern Missouri: Foerste, 1.
- Subsurface geology of northeastern Missouri: Grohskopf, 3.
- Plattin and Kimmswick in synonymy: Keyes, 104.
- Redundancy of Kimmswick title of Missouri: Keyes, 128.
- Structural reconnaissance of Mississippi Valley area: Krey, 1.
- Revision of the Paleozoic system: Ulrich, 21.
- Geology of Ste. Genevieve Co.: Weller, S., 27.

KINDERHOOK GROUP.

- Stratigraphy and paleontology of the Kinderhook group: Branson, 9, 20, 30, 36, 38, 42.
- Stratigraphy and petrology of the Kinderhook near St. Albans: Cozzens, 1.
- Geology of the St. Louis Quadrangle: Fenneman, 4.
- Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.
- Kinderhook stratigraphy: Keyes, 45, 46, 115B; Moore, R. C., 1, 2.
- Unconformities of Kinderhook: Keyes, 135.
- Kinderhookian age of the Chattanooga series: Ulrich, 22.
- Correlation of the Kinderhook formations: Weller, S., 11.
- Geology of southern Calhoun Co., Illinois: Weller, S., 15A.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

KINGS LIMESTONE. Now called COMPTON.

- Geology of Greene Co.: Shepard, E. M., 2.

KINGS BRANCH LIMESTONE.

- Key to geologic horizons of Greene Co.: Shepard, E. M., 4A.

KING HILL SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

KNOB NOSTER GROUP. Now called CHEROKEE in part.

- Report on iron ores: Broadhead, 24.

KNOBTOWN SANDSTONE.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Oil and gas pools in western Missouri: Greene, F. C., 4.

LABETTE SHALE.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Oil and gas pools of western Missouri: Greene, F. C., 4.
 Special report on coal: Haworth, 13A.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LA BIRDIE LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

LADORE SHALE.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LAFAYETTE GRAVEL.

- Geology and bleaching clays of southeastern Missouri: Farrar, 2, 3.
 Geology of Morgan Co.: Marbut, 15.
 Geology of the St. Louis Quadrangle: Fenneman, 4.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Cobble of bauxite in the Lafayette gravel: Robertson, P., 8.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LAGONDA SANDSTONE and SHALE

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Report on the Bevier Sheet: Gordon, 3.

- Geology of Vernon Co.: Greene, F. C., 3.
 Geology of northwestern Missouri: McQueen, 12.

LAMOTTE SANDSTONE. Refer also to POTSDAM and PRISMATIC.

- Geology of Missouri: Branson, 52.
 Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
 Sand and gravel resources of Missouri: Dake, 8.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Subsurface geology of northeastern Missouri: Grohskopf, 3.
 Report on the Mine La Motte Sheet: Keyes, 29.
 Nomenclature of the Cambrian formations of the St. Francois mountains: Keyes, 52.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Lead and zinc deposits of Missouri: Winslow, 14, 20.

LANE SHALE.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LANSING FORMATION. Refer also to PLATTSBURG GROUP.

- Pennsylvanian system in Nebraska: Condra, 1.
 Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Leavenworth-Smithville Folio: Hinds, 6.
 Geology of Jackson Co.: McCourt, 1.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LANSING GROUP.

- Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

LARSH SHALE.

Pennsylvanian system in Nebraska:
Condra, 1.
Geology of northwestern Missouri:
McQueen, 12.

LAWRENCE SHALE.

Pennsylvanian system in Nebraska:
Condra, 1.
Pennsylvanian stratigraphy of Missouri:
Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri:
McQueen, 12.
Pennsylvanian system in Kansas:
Moore, R. C., 3A.

LEAVENWORTH LIMESTONE.

Pennsylvanian system in Nebraska:
Condra, 1.
Geology of northwestern Missouri:
McQueen, 12.
Pennsylvanian system in Kansas:
Moore, R. C., 3A.

LECOMPTON LIMESTONE.

Pennsylvanian system in Nebraska:
Condra, 1.
Pennsylvanian stratigraphy of Missouri:
Hinds, 5.
Geology of northwestern Missouri:
McQueen, 12.
Pennsylvanian system in Kansas:
Moore, R. C., 3A.
Occurrence of oil and gas in Missouri:
Wilson, M. E., 2.

LENAPAH LIMESTONE.

Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Geology of northwestern Missouri:
McQueen, 12.
Pennsylvanian system in Kansas:
Moore, R. C., 3A.

LESUEUR LIMESTONE. Now called POTOSI in part.

Report on Mine La Motte Sheet: Keyes, 29.

LEXINGTON COAL HORIZON.

Geology of Missouri: Branson, 52.
Coal deposits of Missouri: Hinds, 4.
Lexington formation in Missouri:
Keyes, 98.
Extension of Lexington into Iowa:
Keyes, 111.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri:
McQueen, 12.
Geology of the Lexington Sheet: Marbut, 7.
Geology of the Richmond Quadrangle:
Marbut, 8.
Report on the Higginsville Sheet:
Winslow, 5.

LEXINGTON GROUP. Now called HENRIETTA.

Geological report on the country adjacent to the Pacific Railroad from Sedalia to Kansas City: Broadhead, 24.

LIBERTY MEMORIAL SHALE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

LITHOGRAPHIC LIMESTONE. Now called LOUISIANA.

General geology of Missouri: Broadhead, 35.

LITTLE KAW LIMESTONE.

Geology of northwestern Missouri:
McQueen, 12.
Pennsylvanian system in Kansas:
Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

LITTLE SALINE LIMESTONE. Refer also to ORISKANY.

Geology of Missouri: Branson, 52.
Synonymy of Little Saline limestone:
Keyes, 137.
Oriskany rocks in Illinois: Savage, T. E., 8, 12.
Little Saline limestone: Steward, G. A., 1.
Geology of Ste. Genevieve Co.: Weller, S., 27.

LOESS. Refer also to SEDIMENTARY ROCKS and to PHYSIOGRAPHY.

The loess: Broadhead, 87, 137, 138;
Owen, L. A., 2, 3, 4.
Lime and cement resources of Missouri: Buehler 1.
Loess of North America, 1882: Call, 1.
Sand and gravel resources of Missouri:
Dake, 8.
Geology of southeastern Missouri:
Farrar, 2, 3.
Geology of the St. Louis Quadrangle:
Fenneman, 4.
Upland loess of Missouri: Hershey, 8.
Loess and drift of Missouri: Holmes, 21.
Chart of the distribution of loess:
Huntington, E., 1.
Loess and Kansas drift: Keyes, 72.
Geology of Jackson Co.: McCourt, 1.
Loess in St. Louis and St. Louis Co.: Marx, 1; Robertson, P., 2, 3.
Lower Mississippi Valley loess: Russell, 1.
Richthofen theory of loess: Todd, 2.
Formation of Quaternary deposits:
Todd, 7.
Aqueous loess: Todd, 8.
Geology of Ste. Genevieve Co.: Weller, S., 27.

- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- LOUISIANA LIMESTONE.** Refer also to **LITHOGRAPHIC.**
- Geology of Missouri: Branson, 52.
 - Lime and cement resources of Missouri: Buehler, 1.
 - Subsurface geology of northeastern Missouri: Grohskopf, 3.
 - The principal Mississippian section: Keyes, 3.
 - Kinship remoteness of Chouteau and Louisiana limestones: Keyes, 162.
 - Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 - Early Mississippian formations in Missouri: Moore, R. C., 2.
 - Geology of Pike Co.: Rowley, 24.
 - Louisiana limestone of northeastern Missouri: Williams, J. S., 1, 8.
 - Correlation of Louisiana limestone with beds at Kinderhook, Illinois: Williams, J. S., 5.
- LOUTRE FORMATION.**
- Geology of Missouri: Branson, 52.
 - Geology of the Fire Clay district of east central Missouri: McQueen, 16.
- LOWER HELDERBERG.** Now called **BAILEY.**
- General geology of Missouri: Broadhead, 35.
- McNAIRY SAND.**
- Geology and bleaching clays of southeastern Missouri: Farrar, 2.
- MACON CITY COAL HORIZON.**
- Report on the Bevier Sheet: Gordon, 3.
- MAQUOKETA SHALE.**
- Geology of Missouri: Branson, 52.
 - Subsurface geology of northeastern Missouri: Grohskopf, 3.
 - Stratigraphy of Maquoketa shale: Johnson, H. N., 1.
 - Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 - Nomenclature of Galena and Maquoketa series: Sardeson, 1.
 - Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- MAPLE HILL LIMESTONE.**
- Pennsylvanian system in Nebraska: Condra, 1.
 - Geology of northwestern Missouri: McQueen, 12.
 - Pennsylvanian system in Kansas: Moore, R. C., 3A.
- MARAIS DES CYGNES COAL SERIES.** Now called **PLEASANTON** in part.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- MARAIS DES CYGNES SHALES.** Now called **PLEASANTON.**
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 - Formational synonymy of Coal Measures of western basin: Keyes, 49.
 - Validity of Marais des Cygnes: Keyes, 98.
- MERAMEC GROUP.** Refer also to **AUGUSTA.**
- Quarrying industry of Missouri: Buckley, 5.
 - Some curious incongruities of early Carbonic Meramec division: Keyes, 115E.
 - Fallacy of early Carbonic Meramec grouping: Keyes, 133.
 - Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 - Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- MERRIAM LIMESTONE.**
- Geology of Missouri: Branson, 52.
 - Geology of northwestern Missouri: McQueen, 12.
 - Pennsylvanian system in Kansas: Moore, R. C., 3A.
 - Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- MIDDLE CREEK LIMESTONE.**
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 - Geology of northwestern Missouri: McQueen, 12.
 - Pennsylvanian system in Kansas: Moore, R. C., 3A.
 - Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- MIDWAY GROUP.**
- Geology of southeastern Missouri: Farrar, 2, 3.
 - Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.
- MINEOLA LIMESTONE.**
- Devonian of Missouri: Branson, 12, 52.
 - Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- MISSION CREEK SHALE.**
- Pennsylvanian system in Nebraska: Condra, 1.
 - Geology of northwestern Missouri: McQueen, 12.
 - Pennsylvanian system in Kansas: Moore, R. C., 3A.
- MISSISSIPPIAN SYSTEM.** Refer also to **CARBONIFEROUS** and **MOUNTAIN.**
- Mississippian chert near St. Louis: Barton, 1.
 - Mississippian series of Missouri: Branson, 17.

- Lower Mississippian of Missouri: Branson, 36, 38, 39, 40, 42; Moore, R. C., 2.
- Relationship of upper Devonian to lower Mississippian: Branson 16, 44.
- Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
- Geology of the Granby area: Buckley, 11.
- Mississippian formations in southern Illinois: Coryell, 1.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Classification of lower Carboniferous: Keyes, 2.
- Principal Mississippian section: Keyes, 3.
- Superior Mississippian in western Missouri: Keyes, 15.
- Classification of Mississippian series: Keyes, 40; Weller, S., 6.
- Taxonomy of Mississippian section: Keyes, 87, 93.
- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- Mississippian stratigraphy: Landon, 1, 2.
- Geology of the Rolla Quadrangle: Lee, W., 2.
- Early Mississippian formations in Missouri: Moore, R. C., 2.
- Mississippian system in the upper Mississippi Valley: Moore, R. C., 1A, 3B.
- Notes on sub-Carboniferous series at Sedalia: Sampson, 2.
- Mississippian strata near St. Louis: Shipton, 1.
- Stratigraphy of the Mississippian formations of Iowa: Van Tuyl, 2.
- Mississippian border of eastern Interior basin: Weller, J. M., 15.
- Correlation of Devonian and Mississippian faunas: Weller, S., 17.
- Early attempts at Mississippian correlations: Winchell, A., 2, 3, 4.
- Sub-Carboniferous limestone: Worthen, A. H., 6.
- MISSOURI GROUP.**
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Occurrence of oil and gas in Missouri: Wilson, 2.
- MISSOURI SERIES.**
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Traverse of the upper Des Moines and lower Missouri series: Cline, 4.
- Pennsylvanian system in Nebraska: Condra, 1.
- Missourian series: Keyes, 41, 44.
- Discordance of Missourian on Des Moines: Keyes, 97.
- Missourian series a sedimental cycle: Keyes, 112.
- Defense of Missourian: Keyes, 140.
- Kansas City group, basal Missourian: Keyes, 146.
- Validity of Missourian Linwood shales: Keyes, 160.
- Marine anomaly of Missourian coal measures: Keyes, 164.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- MOBERLY SANDSTONE.**
- Coal deposits of Missouri: Hinds, 4.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Geology of the Fire Clay districts of east central Missouri: McQueen, 16.
- Geology of the Huntsville Quadrangle: Marbut, 6.
- Geology of the Lexington Sheet: Marbut, 7.
- MONTSERRAT COAL HORIZON.**
- Coal deposits of Missouri: Hinds, 4.
- MOREAU SANDSTONE.** Now called ROUBIDOUX.
- Lead and zinc deposits of Missouri: Winslow, 14.
- MOUNTAIN LIMESTONE.** Now called MISSISSIPPIAN.
- Second annual report Geological Survey of Missouri: Swallow, 2.
- Remarks upon the discovery of a terrestrial flora in the Mountain limestone of Illinois: Worthen, A. H., 1A.
- MULBERRY COAL HORIZON.**
- Geology of Missouri: Branson, 52.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Geology of Vernon Co.: Greene, F. C., 3.
- Coal deposits of Missouri: Hinds, 4.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- MULKY COAL HORIZON.**
- Geology of Missouri: Branson, 52.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Traverse of upper Des Moines and lower Missouri series: Cline, 4.
- Geology of Vernon Co.: Greene, F. C., 3.
- Coal deposits of Missouri: Hinds, 4.
- Geology of Jackson Co.: McCourt, 1.
- Geology of northwestern Missouri: McQueen, 12.
- Report on the Higginsville Sheet: Winslow, 5.

MUNCIE CREEK SHALE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Geology of Johnson and Miami Cos., Kansas: Newell, 1.

NIAGARA LIMESTONE. Now called BAINBRIDGE.

- General geology of Missouri: Broadhead, 35.
- Geology of Pike Co.: Rowley, 24.
- Geology of southern Calhoun Co., Illinois: Weller, S., 15A.

NODAWAY COAL HORIZON.

- Coal deposits of Missouri: Hinds, 4.

NOEL SHALE. Refer also to CHATTA-NOOGA and EUREKA.

- Geology of Missouri: Branson, 52.
- Geology of the Cassville Quadrangle: Clark, E. L., 3A.
- Fayetteville Folio: Purdue, 2.

NOIX OOLITE.

- Geology of Missouri: Branson, 8, 52.
- Carboniferous formations of the Ozark region: Keyes, 38.
- Affinities of the Alexandrian series: Keyes, 73A.
- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
- Alexandrian series in Missouri and Illinois: Savage, T. E., 3.
- Revision of the Paleozoic systems: Ulrich, 21.

NORTHVIEW SHALE.

- Lower Mississippian of Missouri: Branson, 38, 39, 52.
- The Northview formation: Gardner, 1.
- Early Mississippian formations in Missouri: Moore, R. C., 2.
- Correlation of the Kinderhook formations of southwestern Missouri: Weller, S., 11.

NOWATA SHALE.

- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.

NYMAN COAL HORIZON.

- Coal deposits of Missouri: Hinds, 4.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OLATHE LIMESTONE.

- Geology of Missouri: Branson, 52.
- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Geology of Johnson and Miami Cos., Kansas: Newell, 1.

ONONDAGA LIMESTONE. Now called COOPER.

General geology of Missouri: Broadhead, 35, Branson, 52.

Geology of Lincoln Co.: Potter, W. B., 1.

Second annual report Geological Survey of Missouri: Swallow, 2.

ORCHARD CREEK SHALE.

Geology of Missouri: Branson, 52.

Ordovician and Silurian formations in Alexander Co., Illinois: Savage, T. E., 1.

Alexandrian rocks of northeastern Illinois and eastern Wisconsin: Savage, T. E., 2A.

Thebes sandstone and Orchard Creek shale and their faunas: Savage, T. E., 7.

ORDOVICIAN SYSTEM.

Middle Ordovician section, east central Missouri: Bridge, 1.

Stratigraphy of some lower Ordovician formations of the Ozark uplift: Cullison, 5.

Ordovician outcrop in Saline Co.: Grohskopf, 4.

Ordovician system of upper Mississippi Valley: Kay, G. M., 3.

Mid-Ordovician nomenclature: Keyes, 85.

Magnesian series of Ozark uplift, 1893: Nason, 3.

Revision of the Paleozoic system, Ordovician: Ulrich, 26.

Ordovician-Silurian boundary: Ulrich, 28.

Correlation of early Paleozoic: Ulrich, 33, 35.

OREAD LIMESTONE.

Pennsylvanian system in Nebraska: Condra, 1.

Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ORISKANY SANDSTONE. Now called LITTLE SALINE.

General geology of Missouri: Broadhead, 35.

OSAGE GROUP. Refer also to **AUGUSTA**.

Geology of Missouri: Branson, 52.
Osage formations of southern Ozark region: Cline, 1.

Geology of the St. Louis Quadrangle: Fenneman, 4.

Early Osage formations of eastern Missouri: Gillerman, 2.

Type locality of Osage group: Keyes, 106.

Early Mississippian formations of Missouri: Moore, R. C., 2, 3.

Osage vs. Augusta: Weller, S., 7.

Correlation papers—Devonian and Carboniferous: Williams, H. S., 2.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OSAGE LIMESTONE. Now called **GASCONADE**.

Lead and zinc deposits of Missouri: Winslow, 14.

OSKALOOSA SHALE.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

OSWEGO LIMESTONE. Now called **FORT SCOTT**.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OVID COAL HORIZON.

Coal deposits of Missouri: Hinds, 4.

OWL CREEK FORMATION.

Geology of Missouri: Branson, 52.

Geology of southeastern Missouri: Farrar, 2, 3.

Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.

OZARKIAN SYSTEM.

Ozarkian epoch: Hershey, 4.

Revision of the Paleozoic systems: Ulrich, 21.

Naylor ledge, a marine limestone of Canadian age filling caverns in upper Ozarkian: Ulrich, 30.

Ozarkian and Canadian section: Ulrich, 31.

Correlating early Paleozoic: Ulrich, 33, 35.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OZAWKIE LIMESTONE.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

PACIFIC SANDSTONE. Now called **ST. PETER**.

Geology of Miller Co.: Ball, S. H., 1.
Quarrying industry of Missouri: Buckley, 5.

PAINT CREEK FORMATION.

Geology of Perry and Cape Girardeau Cos.: Flint, 3, 4.

Geology of Ste. Genevieve Co.: Weller, S., 27.

PALEOZOIC ERA.

Formation margins: Branson, 15.

Stratigraphy of Paleozoic: Broadhead, 119.

Geologic history of Missouri Paleozoic: Broadhead, 122.

Ozark uplift and growth of Paleozoic: Broadhead, 127.

Thickness of Paleozoic in Mississippi Basin: Keyes, 21.

Paleozoic seas and barriers in eastern North America: Schuchert, 13.

Post Devonian igneous intrusion in southeastern Missouri: Tarr, 34.

Correlation of Paleozoic formations of northern Arkansas: Ulrich, 17.

Revision of Paleozoic systems: Ulrich, 21, 26.

Physical and time relations of lower Paleozoic systems and formations: Ulrich, 33.

Principles for correlation applied to lower Paleozoic: Ulrich, 35.

PAOLA LIMESTONE.

Geology of Missouri: Branson, 52.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Geology of Johnson and Miami Cos., Kansas: Newell, 1.

PAWNEE LIMESTONE.

Geology of Missouri: Branson, 52.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Traverse of upper Des Moines and lower Missouri series: Cline, 4.

Geology of Vernon Co.: Greene, F. C., 3.

Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Geology of Jackson Co.: McCourt, 1.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

PEDEE GROUP.

Geology of Missouri: Branson, 52.

Geology of northwestern Missouri: McQueen, 12.

Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.

- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- PENNSYLVANIAN SYSTEM.** Refer also to CARBONIFEROUS and COAL MEASURES.
- Pennsylvanian sandstone in Jackson Co., Bartle, 2.
- Traverse of upper Des Moines and lower Missouri series: Cline, 4.
- Pennsylvanian system in Nebraska: Condra, 1.
- Sand and gravel resources of Missouri: Dake, 8.
- Basal Pennsylvanian transgression in the Ozarks: Dake, 18.
- Geology of the St. Louis Quadrangle: Fenneman, 4.
- Petrology of Pennsylvanian cycles: Frank, A. J., 1.
- Insoluble residues of Pennsylvanian limestone of Boone Co.: Glines, 1.
- Septaria from Pennsylvanian shales: Grawe, 1.
- Geology of Vernon Co.: Greene, 3.
- Subsurface geology of northeastern Missouri: Grohskopf, 3.
- Stratigraphy of Kansas: Haworth, 17.
- Coal deposits of Missouri: Hinds, 4.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Leavenworth-Smithville Folio: Hinds, 6.
- Unconformities in the Pennsylvanian: Hinds, 7.
- Permian-Pennsylvanian section from western Missouri to eastern Kansas: Kellett, 1.
- Genetic emendation of Pennsylvanian series: Keyes, 114A.
- Pennsylvanian coal measures series: Keyes, 144.
- Pennsylvanian outlier at St. Louis: Knight, 3, 13.
- Pennsylvanian overlap in United States: Levorsen, 2.
- Pyrite concretions in Pennsylvanian shales: Mathias, 1.
- Geology of Jackson Co.: McCourt, 1.
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian formations near St. Louis: Meleen, 1.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Pennsylvanian rocks of Kansas-Missouri region: Moore, R. C., 3C.
- Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- Geology of Pike Co.: Rowley, 24.
- Correlation of Pennsylvanian strata: Savage, 6.
- Pyritization in Pennsylvanian shales: Tarr, 28.
- Permo-Carboniferous orogeny: Van der Gracht, 1.
- Pennsylvanian cyclothems: Weller, J. M., 3, 5, 6, 12, 13; Wanless, 1.
- Pennsylvanian overlap: Weller, J. M., 7.
- Occurrence of oil and gas in Missouri: Wilson M. E., 2.
- PERMIAN SYSTEM.** Refer also to CARBONIFEROUS.
- Permian-Pennsylvanian section in western Missouri and eastern Kansas: Kellett, 1.
- Guadalupian series: Keyes, 71.
- Paleogeography of Permian time. Schuchert, 23.
- Permo-Carboniferous orogeny: Van der Gracht, 1, 2.
- PERU SAND.**
- Geology of Missouri: Branson, 52.
- Oil and gas pools of western Missouri: Greene, F. C., 4.
- PHELPS SANDSTONE.** Now called SYLAMORE.
- Geology of the Hahatonka district: Scherer, G. H., 1.
- Geology of Greene Co.: Shepard, E. M., 2, 4A.
- The Pierson Creek mines: Smith, O. M., 1.
- Revision of the Paleozoic systems: Ulrich, 21.
- Correlation of the Kinderhook formations of southwestern Missouri: Weller, S., 11.
- PIKETON GRAVEL.**
- Evolution of the northern part of the lowlands of southeastern Missouri: Marbut, 10.
- PILOT KNOB CONGLOMERATE.**
- Copper deposits of Missouri: Bain, 13.
- Lead and zinc deposits of Missouri: Buckley, 20.
- Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
- PILOT KNOB IRON FORMATION.**
- Iron ores of Missouri: Crane, G. W., 1.
- PIERSON LIMESTONE.**
- Geology of Missouri: Branson, 52.
- Early Mississippian formations in Missouri: Moore, R. C., 2.
- Geology of Greene Co.: Shepard, E. M., 2.
- Correlation of Kinderhook in southwestern Missouri: Weller, S., 11.
- PIERSON POINT SHALE.**
- Pennsylvanian system in Nebraska: Condra, 1.
- Geology of northwestern Missouri: McQueen, 12.

- Pennsylvanian system in Kansas:
Moore, R. C., 3A.
- PLATTIN LIMESTONE.**
Geology of Missouri: Branson, 52.
Quarrying industry of Missouri: Buckley, 5.
Stratigraphy and large fossils of Platin formation in Ste. Genevieve Co.: Fenton, 2.
Platin limestone of northeastern Missouri: Foerste, 1.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Platin formation between Herculaneum and St. Albans: Hinchey, 1.
Platin and Kimmswick in synonymy: Keyes, 104.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Revision of the Paleozoic systems: Ulrich, 21.
Geology of Ste. Genevieve Co.: Weller, S., 27.
- PLATTSBURG GROUP.** Now called LANSING and IOLA in part.
Coal measures in Missouri: Broadhead, 5A.
- PLATTSBURG LIMESTONE.**
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- PLATTSMOUTH LIMESTONE.**
Pennsylvanian system in Nebraska: Condra, 1.
Missourian series of the Carboniferous: Keyes, 44.
Meek's original Plattsmouth terrane: Keyes, 98.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- PLEASANTON FORMATION.** Refer also to MARAIS DES CYGNES.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of Vernon Co.: Greene, F. C., 3.
Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Leavenworth-Smithville Folio: Hinds, 6.
Geology of Jackson Co.: McCourt, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- PLEASANTON GROUP.**
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of northwestern Missouri: McQueen, 12.
- PLEISTOCENE SERIES.** Refer also to QUATERNARY SYSTEM and LOESS; and to GLACIAL FEATURES under PHYSIOGRAPHY.
Extent of glaciation: Antevs, 1.
Geology of Miller Co.: Ball, S. H., 1.
Relation of Pleistocene to pre-Pleistocene formations south of limits of glaciation: Chamberlin, T. C., 1.
Sand and gravel resources of Missouri: Dake, 8.
Geology of southeastern Missouri: Farrar, W., 2, 3.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of Jackson Co.: McCourt, 1.
Pleistocene of northeastern Iowa: McGee, 2.
Geology of Morgan Co.: Marbut, 15.
Middle Mississippi River during Pleistocene: Robertson, P., 4.
Pleistocene terraces of Mississippi River: Robertson, P., 6.
Relationship of Pleistocene to pre-Pleistocene formations of Crowley's Ridge: Salisbury, 1.
Pleistocene of the Missouri Valley: Shimek, 1, 2.
Annual deposit of Missouri River during post-Pliocene: Todd, 1.
Pleistocene problems: Todd, 6.
Geology of Moniteau Co.: Van Horn, F. B., 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- PLIOCENE SERIES.**
Geology of southeastern Missouri: Farrar, 2, 3.
- PORTERS CREEK CLAY.**
Geology of southeastern Missouri: Farrar, 2, 3.
Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.
- POTOSI DOLOMITE.** Refer also to LESUEUR and POTOSI RESIDUARY.
Geology of Missouri: Branson, 52.

- Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
- Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Subsurface geology of northeastern Missouri: Grohskopf, 3.
- Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
- Geology of Ste. Genevieve Co.: Weller, S., 27.
- Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- Lead and zinc deposits of Missouri: Winslow, 14, 20.
- POTOSI GROUP.** Included everything between top of ELVINS and base of ST. PETER.
- Copper deposits of Missouri: Bain, 11, 13.
- POTOSI RESIDUARY.** Now called POTOSI and EMINENCE in part.
- Presence of a limestone conglomerate in lead region of St. Francois Co.: Nason, 5.
- POTOSI SLATES AND CONGLOMERATES.** Now called ELVINS.
- Presence of a limestone conglomerate in lead region of St. Francois Co.: Nason, 5.
- POTSDAM SANDSTONE.** Now called LAMOTTE.
- Potsdam sandstone: Hall, 9.
- Fossils from the Potsdam sandstone: Shumard, 7.
- POWELL DOLOMITE.** Refer also to YELLVILLE.
- Geology of Missouri: Branson, 52.
- Lower Ordovician stratigraphy: Cullison, 5.
- Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
- Eureka Springs-Harrison Folio: Purdue, 2.
- Geology of Ste. Genevieve Co.: Weller, S., 27.
- PRE-CAMBRIAN ERA.** Refer also to IGNEOUS ROCKS under PETROLOGY AND PETROGRAPHY.
- General geology of Missouri: Broadhead, 35; Branson, 52.
- Age of porphyries: Broadhead, 71, 72.
- Archean rocks of Missouri: Broadhead, 96.
- Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
- Disseminated lead deposits of Missouri: Buckley, 22.
- Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
- Igneous rocks at Skrainka, Madison Co.: Denham, 1.
- Pre-Cambrian structure in Missouri: Graves, 2.
- Crystalline rocks of the plains: Gould, 2.
- Age of porphyry hills of southeast Missouri: Harrison, E., 2.
- Archean geology of Missouri: Harworth, 4, 5, 6, 7, 10, 13.
- Granite rocks of Missouri: Keyes, 16.
- Relations of granites and porphyries in eastern part of Ozarks: Keyes, 20.
- Report on Mine La Motte Sheet: Keyes, 29.
- What shall we do with pre-Cambrian?: Keyes, 100.
- Igneous geology of Ste. Genevieve Co.: Kidwell, 1.
- Igneous geology of St. Francois Mountains: Koch, H. L., 1.
- Geology of Pilot Knob and Iron Mountain: Meyer, 1, 2.
- Igneous geology of Ironton and Fredricktown Quadrangles: Robertson, F., 1.
- Flow sequence of felsite rocks: Robertson, F., 2.
- Second annual report Geological Survey of Missouri: Swallow, 2.
- Intrusive relation of granite to rhyolite: Tarr, 32; Tolman, 5.
- Geology of the Silver Mine area: Tolman, 3.
- Granite pegmatites and veins: Tolman, 6.
- Igneous activity in southeastern Missouri: Tolman, 8, 9.
- Igneous rocks of St. Francois Mountains: Wing, 1.
- Azoic system: Wadsworth, 1.
- Geology of northwest quarter of Ironton Quadrangle: Walker, 1.
- PRESTON LIMESTONE.**
- Geology of northwestern Missouri: McQueen, 12.
- Pennsylvanian system in Kansas: Moore, R. C., 3A.
- Missouri series in southwestern Iowa: Tilton, 2.
- PRISMATIC SANDSTONE.** Now called LAMOTTE.
- Prismatic sandstone from Missouri: Harworth, 9.
- PROCTOR DOLOMITE.**
- Geology of Miller Co.: Ball, S. H., 1.
- Copper deposits of Missouri: Bain, 11, 13.
- Geology of Missouri: Branson, 8, 52.
- Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
- Geology of Morgan Co.: Marbut, 15.
- Revision of the Paleozoic systems: Ulrich, 21.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

Lead and zinc deposits of Missouri: Winslow, 14.

PROSSER LIMESTONE. Now called KIMMSWICK.

Invalidity of Prosser term in Missouri: Keyes, 108.

QUATERNARY SYSTEM. Refer also to PLEISTOCENE and LOESS; and to GLACIAL FEATURES under PHYSIOGRAPHY.

Quaternary period of Mississippi River Basin: Alden, 1.

Quaternary deposits: Broadhead, 9; Todd, 5, 6, 7; Swallow, 7.

Structural reconnaissance of the Mississippi Valley area: Krey, 1.

Geology of Jackson Co.: McCourt, 1.

Quaternary deformation in southeastern Missouri: Shaw, 1.

Early Quaternary or late Tertiary folding in Scott Co.: Stewart, D., 2.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

QUEEN HILL SHALE.

Pennsylvanian system in Nebraska: Condra, 1.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

QUINDARO SHALE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Geology of Johnson and Miami Cos., Kansas: Newell, 1.

QUIVIRA SHALE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Geology of Johnson and Miami Cos., Kansas: Newell, 1.

RAYTOWN LIMESTONE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J. 3.

Pennsylvanian stratigraphy of Missouri: Hinds, 5.

Geology of Jackson Co.: McCourt, 1.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

Geology of Johnson and Miami Cos., Kansas: Newell, 1.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

READING LIMESTONE.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

RECEPTACULITE LIMESTONE. Now called KIMMSWICK.

General geology of Missouri: Broadhead, 35.

Lead and zinc deposits of Missouri: Winslow, 14.

REEDS SPRING LIMESTONE.

Geology of Missouri: Branson, 52.

Geology of the Cassville Quadrangle: Clark, E. L., 3A.

Kansas Geological Society 7th annual field conference guidebook: Kansas Geological Society, 3.

Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.

Early Mississippian formations in Missouri: Moore, R. C., 2.

RENAULT FORMATION.

Geology of Missouri: Branson, 52.

Stratigraphy of Chester group in southwestern Illinois: Weller, S., 21.

Geology of Ste. Genevieve Co.: Weller, S., 27.

RHOMBOIDAL LIMESTONE.

Geology of northwestern Missouri: McQueen, 12.

RICH FOUNTAIN FORMATION.

Lower Ordovician stratigraphy: Cullison, 5.

RICH HILL LIMESTONE.

Geology of Vernon Co.: Greene, 3.

Geology of northwestern Missouri: McQueen, 12.

RIPLEY FORMATION.

Geology of Missouri: Branson, 52.

Geology of southeastern Missouri: Farrar, 2, 3.

Bauxitic clay in Stoddard Co.: Stewart, D., 1.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ROCK BLUFF LIMESTONE.

Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

ROCK LAKE SHALE.

- Geology of northwestern Missouri:
McQueen, 12.
Pennsylvanian system in Kansas:
Moore, R. C., 3A.

ROUBIDOUX FORMATION. Refer also to BOLIN CREEK, MOREAU, ST. ELIZABETH and SECOND SANDSTONE.

- Geology of Missouri: Branson, 52.
Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
Heavy minerals in the Roubidoux and other sandstones of the Ozark region: Cordry, 1.
Sand and gravel resources of Missouri: Dake, 8.
Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of the Rolla Quadrangle: Lee, W., 2.
Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
Geology of Morgan Co.: Marbut, 15.
Report on iron ores: Nason, 2.
Roubidoux near Rolla: Schultz, J. E., 1.
Revision of the Paleozoic systems: Ulrich, 21.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

RULO LIMESTONE.

- Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SAC LIMESTONE. Now called COMPTON.

- Geology of Greene Co.: Shepard, E. M., 2.

SACCHAROIDAL SANDSTONE. Now called ST. PETER.

- The saccharoidal sandstone: Broadhead, 139.
Geology of Lincoln Co.: Potter, W. B., 1.
Second annual report Geological Survey of Missouri: Swallow, 2.

ST. ELIZABETH FORMATION. Now called ROUBIDOUX.

- Geology of Miller Co.: Ball, S. H., 1.
Geology of Moniteau Co.: Van Horn, F. B., 1.

ST. FRANCOIS LIMESTONE. Includes everything from top of LAMOTTE to top of POTOSI.

- Lead and zinc deposits of Missouri: Winslow, 14.

STE. GENEVIEVE LIMESTONE.

- Geology of Missouri: Branson, 52.
Ste. Genevieve outliers in St. Louis Co.: Gollhofer, 1.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Observations of geology of County of Ste. Genevieve: Shumard, 6.
Geology of Ste. Genevieve Co.: Weller, S., 27.

ST. JOE LIMESTONE.

- Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
Early Mississippian formations in Missouri: Moore, R. C., 2.
Eureka Springs-Harrison Folio: Purdue, 2.

ST. JOSEPH LIMESTONE. Now called ELVINS and BONNETERRE.

- Geological relations and age of the St. Joseph: Nason, 6.
Lead and zinc deposits of Missouri: Winslow, 14, 20.

ST. LAURENT FORMATION. Refer also to ST. LORENZ.

- Geology of Missouri: Branson, 52.
Devonian of southeastern Missouri: Croneis, 4.
Synonymy of St. Laurents limestone of Missouri: Keyes, 148.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ST. LORENZ FORMATION. Now called ST. LAURENT.

- Sand and gravel resources of Missouri: Dake, 8.

ST. LOUIS LIMESTONE.

- General geology of Missouri: Broadhead, 35; Branson, 52.
St. Louis formation in southwestern Missouri: Clark, E. L., 2.
Carboniferous rocks of St. Louis and vicinity: Englemann, 1.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Brecciated character of St. Louis limestone: Gordon, 1; Grawe, 2.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Fauna and stratigraphy of St. Louis formation: Hinchey, 2.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Geology of Lincoln Co.: Potter, W. B., 1.
Second annual report Geological Survey of Missouri: Swallow, 2.

- Geology of Ste. Genevieve Co.: Weller, S., 27.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- ST. PETER SANDSTONE.** Refer also to CAP AU GRES, CRYSTAL CITY, FIRST SANDSTONE, PACIFIC and SACCHAROIDAL.
 Paleogeography of St. Peter sandstone: Berkey, 1.
 Geology of Missouri: Branson, 52.
 Sand and gravel resources of Missouri: Dake, 8.
 Derivation of St. Peter sandstone: Dake, 9, 10.
 Taxonomic significance of St. Peter sandstone: Dake, 11.
 Resume of St. Peter stratigraphy: Edson, 1.
 St. Peter sandstone in southeastern Missouri: McQueen, 10.
 Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 Geology of Morgan Co.: Marbut, 15.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Peter sandstone and its buttes: Sardeson, 1.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- SALEM LIMESTONE.** See also SPERGEN.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- SALINE CREEK CAVE CONGLOMERATE.**
 Geology of Miller Co.: Ball, S. H., 1.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
- SAVERTON SHALE.**
 Geology of Missouri: Branson, 52.
 Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.
 Early Mississippian formations in Missouri: Moore, R. C., 2.
 Northward extension of Saverton shale into Iowa: Keyes, 136.
- SCRANTON SHALE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- SECOND MAGNESIAN LIMESTONE.** Includes everything from top of ROUBIDOUX to top of EVERTON.
 General geology of Missouri: Broadhead, 35.
- Geology of Lincoln Co.: Potter, W. B., 1.
 Second annual report Geological Survey of Missouri: Swallow, 2.
- SECOND SANDSTONE.** Now called ROUBIDOUX.
 General geology of Missouri: Broadhead, 35.
 Second annual report Geological Survey of Missouri: Swallow, 2.
- SEDALIA LIMESTONE.**
 Geology of Missouri: Branson, 52.
 Rock wool resources of Central Missouri: McQueen, 11.
 Subsurface geology of northeastern Missouri: Grohskopf, 3.
 Redundancy of Sedalia limestone title in Missouri: Keyes, 114D.
 Early Mississippian formations in Missouri: Moore, R. C., 2.
- SEVERY SHALE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- SEXTON CREEK LIMESTONE.**
 Geology of Missouri: Branson, 52.
 Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 Alexandrian series in Illinois and Missouri: Savage, T. E., 4.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- SHAWNEE FORMATION.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Leavenworth-Smithville Folio: Hinds, 6.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- SHAWNEE GROUP.**
 Geology of Missouri: Branson, 52.
 Correlation of members of Shawnee group: Condra, 4.
 Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

SHELDON LIMESTONE.

- Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SHORT CREEK OOLITE.

- Geology of Missouri: Branson, 52.
Eureka Springs-Harrison Folio: Purdue, 2.
Joplin District Folio: Smith, W. S. T., 2A.

SILURIAN SYSTEM.

- Silurian correlation in Mississippi basin: Ball, J. R., 7, 11A, 12, 15.
Revision of Silurian of southeastern Missouri: Flint, 1.
Cambro-Silurian question: Keyes, 13.
Affinities of Siluric formations: Keyes, 81.
Merging of Devonian and Silurian periods: Keyes, 89A.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Geology of Pike Co.: Rowley, 24.
Silurian strata of Cape Girardeau Co.: Shumard, 9.
Correlation of Silurian formations of North America: Swartz, 1.
Correlation of lower Silurian horizons: Ulrich, 2.
Lower Silurian in the Mississippi Valley: Ulrich, 12, 15.
Ordovician-Silurian boundary: Ulrich, 28.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

SILVER LAKE SHALE.

- Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SMITHVILLE DOLOMITE.

- Insoluble residues as a guide in stratigraphic studies: McQueen, 5.

SNI MILLS LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Kansas Geological Society 10th annual field conference guidebook: Kansas Geological Society, 4.

SNIABAR LIMESTONE.

- Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

SNYDER CREEK SHALE. Refer also to HAMILTON and CRAGHEAD CREEK.

- Devonian of Missouri: Branson, 12, 52.
Structural and economic geology of Missouri: Gallaher, J. A., 2.
Devonian interval in Missouri: Keyes, 62.

SNYDERVILLE SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SQUIRREL SAND.

- Geology of the Blue Springs gas field: Bartle, 1.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

SOUTH BEND LIMESTONE.

- Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SOLDIER CREEK SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SPERGEN LIMESTONE. Refer also to SPERGEN HILL and SALEM.

- Geology of Missouri: Branson, 52.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Stratigraphy of Spergen formation: Robitshek, 1, 2.
Geology of southern Calhoun Co., Illinois: Weller, S., 15A.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Paleontology and stratigraphy of Spergen limestone in eastern Missouri: Yenne, 1.

SPERGEN HILL LIMESTONE. Now called SPERGEN.

- Quarrying industry of Missouri: Buckley, 5.

SPRING BRANCH LIMESTONE.

- Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.

- Pennsylvanian system in Kansas:
Moore, R. C., 3A.
- SPRING HILL LIMESTONE.**
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- STANTON LIMESTONE.**
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Leavenworth-Smithville Folio: Hinds, 6.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- STARK SHALE.**
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- STONER LIMESTONE.**
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- STRANGER FORMATION.**
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- STRATIGRAPHY, GENERAL.**
Geology of Missouri: Branson, 8, 52.
Stratigraphy near East St. Louis: Feneman, 2.
Influence of stratigraphy on emergence of springs in Ozark uplift: Hopkins, 1.
Scheme of stratigraphic succession in Missouri: Keyes, 73.
Type Ozarkian section: Keyes, 141.
Revised chart of formations of Missouri: Keyes, 142.
- Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
Time equivalent vs. lithological extension of formations: Melton, 2.
Correct succession of the Ozark series: Nason, 4.
Stratigraphic nomenclature in the United States: Reeside, 1.
Stratigraphy of eastern and central United States: Schuchert, 24; Weller, J. M., 17.
Table of geological formations in Missouri, 1904: Shepard, E. M., 4.
Key to rocks and geological horizons of Greene Co.: Shepard, E. M., 8.
Revision of the Paleozoic systems: Ulrich, 21.
Index to the stratigraphy of eastern Kansas and adjoining areas: Ver Wiebe, 1.
Index to the stratigraphy of North America: Willis, 1.
Lexicon of geologic names of the United States: Wilmarth, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- STULL SHALE.**
Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
- SULPHUR SPRINGS FORMATION.**
Geology of Missouri: Branson, 52.
Quarrying industry of Missouri: Buckley, 5.
Synonymy of Sulphur Springs: Keyes, 123.
Early Mississippian formations in Missouri: Moore, R. C., 2.
Geology of Ste. Genevieve Co.: Weller, S., 27.
- SUMMIT COAL HORIZON.**
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Des Moines series: Cline, 4.
Report on the Bevier Sheet: Gordon, 3.
Geology of the Fire Clay districts of east central Missouri: McQueen, 16.
- SWOPE LIMESTONE.**
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

SYLAMORE SANDSTONE. Refer also to PHELPS.

- Geology of Missouri: Branson, 52.
 Geology of the Cassville Quadrangle: Clark, E. L., 3A.
 Sylamore sandstone in southwestern Missouri: Grohskopf, 6.
 Genetic affinities of so-called Sylamore sandstone: Keyes, 114E.
 Zinc and lead deposits of northern Arkansas: McKnight, 1.
 Early Mississippian formations in Missouri: Moore, R. C., 2.
 Physical composition of the Sylamore sandstone: Murdock, 1.
 Eureka Springs-Harrison Folio: Purdue, 2.

TABLE CREEK SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

TARKIO LIMESTONE.

- Pennsylvanian system in Nebraska: Condra, 1.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

TAR SPRINGS SANDSTONE.

- Geology of Missouri: Branson, 52.
 Geology of Perry and Cape Girardeau Cos.: Flint, 3, 4.

TEBO COAL HORIZON.

- Geology of Missouri: Branson, 52.
 Coal deposits of Missouri: Hinds, 4.
 Geology of the Calhoun Sheet: Marbut, 4.
 Geology of the Clinton Sheet: Marbut, 5.
 Geology of the Fire Clay district of east central Missouri: McQueen, 16.

TECUMSEH SHALE.

- Pennsylvanian system in Nebraska: Condra, 1.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

TERTIARY SYSTEM.

- Sand and gravel resources of Missouri: Dake, 8.
 Geology of Vernon Co.: Greene, F. C., 3.

Winoka gravel, southwest Missouri: Hays, M., 1; Park, 1.

Structural reconnaissance of the Mississippi Valley area: Krey, 1.

Tertiary of Kentucky, Illinois and Missouri: Lamar, 1.

Early Quaternary or late Tertiary folding in Scott Co.: Stewart, D., 2.

Geology of Ste. Genevieve Co.: Weller, S., 27.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

THEBES SANDSTONE.

- Sand and gravel resources in Missouri: Dake, 8.
 Thebes sandstone: Savage, T. E., 7.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

THEODOSIA FORMATION.

- Lower Ordovician stratigraphy: Cullison, 5.

THIRD MAGNESIAN LIMESTONE. Now called GASCONADE.

- General geology of Missouri: Broadhead, 35.
 Second annual report Geological Survey of Missouri: Swallow, 2.

THIRD SANDSTONE. Now called GUNTER.

- General geology of Missouri: Broadhead, 35.
 Second annual report Geological Survey of Missouri: Swallow, 2.

TINA LIMESTONE.

- Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.

TOM SAUK LIMESTONE. Now called BONNETERRE.

- Tom Sauk limestone of southeastern Missouri: Brightman, 1; Dake, 15.

TONGANOXIE SANDSTONE.

- Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.

TOPEKA LIMESTONE.

- Pennsylvanian system in Nebraska: Condra, 1.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

- TORONTO LIMESTONE.** Refer also to **WEeping WATER.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- TRENTON LIMESTONE.** Now called **KIMMSWICK.**
 Geology of Lincoln Co.: Potter, W. B., 1.
 Geology of the United States, 1825: Rodgers, 1.
 Trenton limestone and Hudson River shales: Rowley, 6.
 Geology of Pike Co.: Rowley, 24.
 Lead and zinc deposits of Missouri: Winslow, 14.
- TURNER CREEK SHALE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- UNION STATION SHALE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- VAN BUREN FORMATION.**
 Geology of Missouri: Branson, 52.
 Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
 Geology of the Potosi-Edgehill Quadrangle: Dake, 15.
 Subsurface geology of northeastern Missouri: Grohskopf, J., 3.
 Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
- VERDEGRIS LIMESTONE.**
 Geology of northwestern Missouri: McQueen, 12.
- VERMICULAR SANDSTONE and SHALE.** Now called **HANNIBAL.**
 General geology of Missouri: Broadhead, 35.
 Geology of Lincoln Co.: Potter, W. B., 1.
- VICTORY JUNCTION SHALE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- VIENNA LIMESTONE.**
 Geology of Perry and Cape Girardeau Cos.: Flint, 3, 4.
- VILLAS SHALE.**
 Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- VINELAND SHALE.**
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WABAUNSEE FORMATION.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Coal deposits of Missouri: Hinds, 4.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Validation of Wabauñsee formation through conditional unconformity: Keyes, 114C.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- WABAUNSEE GROUP.**
 Geology of Missouri: Branson, 52.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WALKER CONGLOMERATE and SANDSTONE.**
 Geology of Greene Co.: Greene, F. C., 3.
- WAKARUSA LIMESTONE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WARRENSBURG CHANNEL SANDSTONE.**
 Geology of the Blue Springs gas field: Bartle, 1.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Report on the Higginsville Sheet: Winslow, 5.
- WARSAW FORMATION.** Refer also to **ARCHIMEDES.**
 General geology of Missouri: Broadhead, 35; Branson, 52.
 Geology of the St. Louis Quadrangle: Fenneman, 4.
 Subsurface geology of northeastern Missouri: Grohskopf, 3.
 Diastrophic kinship of Warsaw shale formation: Keyes, 115G.

- Structural reconnaissance of the Mississippi Valley area: Krey, 1.
 Warsaw formation near St. Louis: Maxwell, 1.
 Early Mississippian formations in Missouri: Moore, R. C., 2.
 The Warsaw formation: Weller, J. M., 11.
 Geology of southern Calhoun Co., Illinois: Weller, S., 15A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- WAVERLY COAL HORIZON.**
 Report on the Higginsville Sheet: Winslow, 5.
- WAYSIDE SANDSTONE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Oil and gas pools of western Missouri: Greene, F. C., 4.
- WEA SHALE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Geology of Johnson and Miami Cos., Kansas: Newell, 1.
- WEeping WATER LIMESTONE.** Refer also to TORONTO.
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WEIR COAL HORIZON.**
 Coal deposits of Missouri: Hinds, 4.
- WESTERVILLE LIMESTONE.**
 Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WESTON SHALE.**
 Geology of Missouri: Branson, 52.
 Pennsylvanian system in Nebraska: Condra, 1.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Missourian series of the Carboniferous: Keyes, 44.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WHITE CLOUD SHALE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WHITE RIVER LIMESTONE.** Includes all pre-ST. PETER rocks of southwestern Missouri.
 Lead and zinc deposits of Missouri: Winslow, 14.
- WILCOX GROUP.**
 Geology of southeastern Missouri: Farrar, 2, 3.
 Bauxitic clay in Stoddard Co.: Stewart, D., 1.
- WILLARD SHALE.**
 Pennsylvanian system in Nebraska: Condra, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
- WINFIELD DOLOMITE.** Now called COTTER.
 Carboniferous formations of the Ozark region: Keyes, 38.
- WINOKA GRAVEL.**
 Winoka gravel (Greene and adjacent Cos.): Hays, M., 1; Park, 1.
- WINTERSET LIMESTONE.**
 Geology of the Blue Springs gas field: Bartle, 1.
 Geology of Missouri: Branson, 52.
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Pennsylvanian stratigraphy of Missouri: Hinds, 5.
 Geology of Jackson Co.: McCourt, 1.
 Geology of northwestern Missouri: McQueen, 12.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.
 Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
- WITTENBERG SHALE.**
 Genetic function of Wittenberg shales: Keyes, 126, 155, 165.
- WORLAND LIMESTONE.**
 Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
 Traverse of upper Des Moines and lower Missouri series: Cline, 4.
 Oil and gas pools of western Missouri: Greene, F. C., 4.
 Pennsylvanian system in Kansas: Moore, R. C., 3A.

WYANDOTTE LIMESTONE.

Geology of northwestern Missouri:
McQueen, 12.

Pennsylvanian system in Kansas:
Moore, R. C., 3A.

Geology of Johnson and Miami Cos.,
Kansas: Newell, 1.

YANKEETOWN FORMATION.

Geology of Missouri: Branson, 52.

Stratigraphy of the Chester group in
southwestern Illinois: Weller, S., 21.

Geology of Ste. Genevieve Co.: Weller,
S., 27.

YELLVILLE FORMATION. Now called
POWELL.

Revision of the Paleozoic systems:
Ulrich, 21.

Paleontology



AMPHIBIANS.

Amphibian footprints: Butts, 1, 2.

ANTHOZOA.

Bainbridgia typicalis new genus of Auloporidae: Ball, J. R., 6.
New species of corals from Bainbridge: Ball, J. R., 10, 13.
Paleozoic rugose corals, Paleocyclidae: Bassler, 2.
Devonian corals: Branson, 12.
Corals from the Chouteau formation: Easton, 1.
Pennsylvanian corals: Girty, 2.
Mississippian Zaphrentids: Grove, 1.
Lophophyllid corals from the lower Pennsylvanian rocks of Kansas and Oklahoma: Jeffords, 1.
Corals of Missouri: Keyes, 8.
Aulopora: Keyes, 163.
Description of the coal flora of the Carboniferous formation in Pennsylvania and throughout the United States: Lesquereux, 2.
Paleontology (corals) from Pennsylvanian: Miller, S. A., 9.
Corals in Pike Co.: Rowley, 24.
Corals from the lower Silurian: Schuchert, 10.

ARTHROPODA. Refer to CRUSTACEA and INSECTA.

BLASTOIDEA.

Devonian blastoids: Branson, 12.
Catalogue of Blastoidea in British Museum: Carpenter, 1.
Blastoids of the Osage group: Cline, 2.
Bibliographic index of North American Eublastoidea: Greger, 23.
Meramecian Blastoidea from St. Louis area: Greger, 30.
Structure and classification of *Pentremites*: Hambach, 1.
Revision of Blastoidea: Hambach, 4.
Growth stages of Carboniferous microblastoids: Moore, R. C., 5.
Blastoids from Chouteau limestone: Peck, 1, 6.
Natural casts of blastoids from the Burlington limestone: Rowley, 4.
Blastoids from Sub-carboniferous: Rowley, 9, 12.
Blastoids from Devonian: Rowley, 12.

New species of blastoids: Rowley, 16.
Blastoidea including *Pentremites*: Shumard, 5.

New species of blastoids: Springer, 1.

BRACHIOPODA. Arranged alphabetically by genus, formation, period, etc.

Atrypae in central Missouri Devonian: Greger, 29.
Black River brachiopods: Fenton, 1.
Strophomena from Black River and Richmond formations: Fenton, 3.
Camarotoechia: Ball, J. R., 5.
Ozarkian and Canadian brachiopods: Ulrich, 37; Schuchert, 23A.
New species of *Cyclus* from the Carboniferous: Rogers, 5.
Chazyan (Ordovician) brachiopods: Ulrich, 39.
Range of brachiopods in Cherokee formation: Olson, W. S., 1.
Chonetes in western states, 1855: Norwood, J. G., 4.
Pallial sinuses of *Composita argentea*: Weller, J. M., 8.
Devonian brachiopods: Branson, 12.
Devonian and Sub-carboniferous brachiopods: Rowley, 12, 13.
Development of brachial supports in *Dielasma* and *Zygospira*: Schuchert, 5.
Etheridgina: Greger, 19.
Gruenwaldtia: Greger, 28.
Inarticulate brachiopods: Greger, 24.
Typical form and range of *Mesolobus mesolobus*: Weller, J. M., 9.
Brachiopods from the Mississippian: Greger, 8.
Mississippian brachiopods: Moore, R. C., 2.
Dry dredging in the Mississippian sea: Schuchert, 8.
Unique coloration of two Mississippian brachiopods: Rowley, 26.
Genera of Mississippian loop-bearing Brachiopoda: Weller, S., 20.
Mississippian Brachiopoda: Weller, S., 22.
Brachiopods of Missouri: Keyes, 9.
Newberria: Hall, 11.
Lower Ordovician brachiopods: Cullison, 5.
Orthis: Schuchert, 2.
Introduction to study of Paleozoic brachiopods: Hall, 11A.

- Paraphorhynchus*, a Kinderhook Brachiopoda: Weller, S., 13.
 Pennsylvanian brachiopods: Girty, 2.
 Brachiopods of Pike Co.: Rowley, 24.
Productidae of Chouteau limestone: Wallace, C. R., 1.
Productidae of basal Mississippian: Branson, 21.
 Structure in semi-reticulate *Producti*: Girty, 4.
Producti from western states: Norwood, J. G., 3.
Producti from western states: Prathen, 1.
 Classification and distribution of *Producti*: Trowbridge, 1.
Setigerella and *Worthenella* subgenera of *Productus*: Girty, 5.
Productus from the Carboniferous, 1857: Prout, 6.
 Internal character of some rhynchonelliform shells: Weller, S., 19.
 Problematical Rhynchonelloid of Silurian: Ball J. R., 8.
Rhynchopora: Greger, 5.
 Silurian brachiopods: Ball, J. R., 3.
 A new Silurian brachiopod: Rowley, 21.
 Lower Silurian brachiopods: Schuchert, 11.
 Silurian brachiopods of family Triple-siidae: Ulrich, 36.
 Spire-bearing Brachiopoda: Schuchert, 6, 7.
 Observation on shell structure of *Spirifer cuspidatus*: Meek, 9.
Spirifer organensis: Greger, 20.
Spirifer of the Carboniferous: Norwood, J. G., 5.
Spiriferidae of the Chouteau limestone: Gray, S. G., 1.
 Some new varieties of *Spirifer*, 1866: Swallow, 13.
Spirifer: Schuchert, 2.
Spiriferina: Schuchert, 2.
Stropheodonta demissa (Conrad) evolution of: Branson, 14.
Stropholonia: Hinchey, 3.
Syringothyris: Schuchert, 1.
Syringothyris in the Devonian: Schuchert, 18.
 Terebratuloid Brachiopoda of the Silurian and Devonian: Cloud, 1.
Zygospira, the development of its shell: Schuchert, 4.
 Color on fossil brachiopods: Greger, 6, 10.
 Brachiopods: Hall, 12.
 Brachiopod from lead-bearing rocks at Mine La Motte: Meek, 5.
 Classification of Brachiopoda: Schuchert, 3.
 American fossil Brachiopoda: Schuchert, 9, 12.
 Paleographic and geologic significance of recent Brachiopoda: Schuchert, 19.
- BRYOZOA.**
 Devonian Bryozoa: Branson, 12.
 Study of revision of *Archimedes* (Hall): Condra, 5.
 Pennsylvanian Bryozoa: Girty, 2.
Archimedes or *Fenestella* from Carboniferous limestones of Mississippi Valley, 1857: Hall, 6.
 Polyzoa (Bryozoa) of Missouri: Keyes, 9.
 Synopsis of American fossil Bryozoa: Nickel, 1.
 Series of descriptions of Paleozoic Bryozoa: Prout, 7-11.
 Bryozoa from Coal Measures of Missouri: Rogers, 2.
 Bryozoan Rhabdomea in America: Rogers, 4.
Chaetetes and some related genera: Rominger, 1.
 Paleozoic Bryozoa: Ulrich, 1, 7.
 Lower Silurian Bryozoa: Ulrich, 6.
- CEPHALOPODA.**
 Goniatites in Coal Measures: Bisat, 1.
 Devonian cephalopods: Branson, 12.
 Cephalopods in the Eminence-Cardareva Quadrangles: Bridge, 6.
 Lower Ordovician cephalopods: Cullison, 5.
 Studies of late Paleozoic ammonoids, including *Gonioloboceras* and *Properinites*: Elias, 2.
 Pseudorthoceratidae: Flowers, 1.
 Notes on American Paleozoic cephalopods: Foerste, 2.
 Notes on cephalopod genera: chiefly coiled Silurian forms: Foerste, 3.
 Actinosiphonate, trochocerooid, and other cephalopods: Foerste, 4.
 Pennsylvanian cephalopods: Girty, 2.
 Carboniferous cephalopods: Hyatt, 1.
 Cephalopods from upper Paleozoic: Keyes, 27.
 Ammonoid fauna in Cherokee formation: Miller, A. K., 7.
 Carboniferous Ammonoids: Miller, A. K., 8.
 Sub-Carboniferous cephalopods: Miller, S. A., 10.
 Paleozoic cephalopods: Miller, S. A., 18.
 Lower Mississippian cephalopods: Moore, R. C. 2.
 Carboniferous Ammonoids of America: Smith, J. P., 2.
 Ozarkian and Canadian cephalopods: Ulrich, 34, 38, 40.
Prodromites, a new ammonite genus: Smith, J. P., 1.
 Goniatite limestone of Indiana: Worthen, A. H., 3.

CONODONTS.

- Silurian conodont fauna: Branson, 22.
- Assemblages and use of conodonts in stratigraphy: Branson, 23, 32.
- Bainbridge (Silurian) and Jefferson City (lower Ordovician) conodonts: Branson, 25.
- Joachim (middle Ordovician), Platin (middle Ordovician), Maquoke-Thebes (upper Ordovician), Hinds types in British Museum: Branson, 26.
- Grassy Creek shale: Branson, 27.
- Bushberg sandstone and its equivalent: Branson, 28.
- Hannibal formation: Branson 29.
- Ecology of conodonts: Branson, 31.
- Methods and problems, results of conodont studies: Branson, 33.
- Geological affinities and taxonomy: Branson, 34.
- Genus *Icriodus*, its stratigraphic distribution: Branson, 35.
- Assemblages: Branson, 37.
- Lower Mississippian: Branson, 41.
- Late Mississippian and early Pennsylvanian: Branson, 43.
- Ordovician conodonts: Branson, 45.
- Keokuk formation conodonts: Branson, 46.
- Lower Ordovician conodonts: Cullison, 5.
- Conodonts in Pennsylvanian: Ellison, 1-3.
- Composition of conodonts: Ellison, 4.
- Conodonts of shales overlying Lexington Coal bed: Burnley, 1.
- Conodonts from a Bushberg-Hannibal horizon in Oklahoma: Cooper, C. L., 1.
- Conodonts of the Chouteau limestone: Farmer, 1.
- Mississippian and Pennsylvanian conodonts: Gunnell, 1.
- Conodonts from Fort Scott limestone, (Pennsylvanian): Gunnell, 2.
- Conodonts from Cherokee, Kansas City and Wabaunsee groups of Missouri Pennsylvanian: Gunnell, 3.
- Conodonts of the Grassy Creek shale: Kraus, 1.
- Interpretation of the Dutchtown conodont fauna: McLaughlin, 1.
- Conodonts of the Snyder Creek shale: Peery, 2.
- Conodonts from the Sylamore sandstone: Quigley, 1.
- Conodonts from the Jefferson City formation: Ryan, 1.
- Conodonts from the Kimmswick of eastern Missouri: Strothmann, 1.
- Conodonts from the Cooper limestone: Waldram, 1.

CORALS see ANTHOZOA.

CRINOIDEA. Arranged alphabetically by genus, formation, period, etc.

- The development of *Agaricocrinus*: Klem, 1.
- Relationships of family Allagecrinidae: Moore, R. C., 4.
- Allagecrinus* growth stages: Peck, 4.
- Aphelecrinus*, a new inadunate crinoid genus from the upper Mississippian: Kirk, 2.
- Batocrinus calvinia*: Rowley, 3.
- Natural casts of crinoids and blastoids from the Burlington limestone: Rowley, 4.
- Camarocrinus*: Schuchert, 14, 15.
- North American Crinoidea *Camerata*: Wachsmuth, 3.
- Carboniferous crinoids: Meek, 3, 10, 13, 19, 23.
- Lower Carboniferous Crinoidea: Miller, S. A., 8, 13, 14.
- Carboniferous microcrinoids growth stages: Moore, R. C., 5.
- Fossil crinoid family Catilloocrinidae: Springer, 3.
- Crinoid fauna of the Chouteau formation: Keyte, 1; Peck, 6A.
- Crinoids from upper Coal Measures: Butts 4.,
- Compsocrinus*: Miller, S. A., 2.
- Devonian crinoids: Branson, 12; Miller, S. A., 2, 11A.
- Fossil crinoid genus *Dolatocrinus* and and its allies: Springer, 2.
- Eupachyrcrinus* and related genera: Kirk, 1.
- The Crinoidea flexibilia: Springer, 1.
- Gaurocrinus*: Miller, S. A., 2.
- Glyptocrinus*: Miller, S. A., 2.
- Graphiocrinus* in America: Keyes, 121B.
- Species of *Hydreionocrinus* from the Coal Measures: Weller, S., 5.
- Microcrinoids from Kinderhook and Osage: Peck, 5.
- Crinoids of Missouri: Keyes, 8.
- Crinoids from Missouri, etc.: Miller, S. A., 15.
- Revision of Paleocrinoidea: Wachsmuth, 1.
- Crinoids from Paleozoic: Shumard, 1.
- Crinoidea from Paleozoic: Meek, 4, 7, 10, 11, 14, 16, 23, 24.
- Pennsylvanian Crinoidea: Girty, 2.
- Larviform crinoids from lower Pennsylvanian strata: Weller, J. M., 2.
- Crinoids in Pike Co.: Rowley, 24.
- Pycnocrinus*: Miller, S. A., 2.
- Scyphocrinus*: Bassler, 1.
- Strotocrinus* and other crinoids: Miller, S. A., 3.
- Crinoids from Subcarboniferous: Rowley, 9, 12, 13.

- Crinoidea from Subcarboniferous: Shumard, 1.
 New species of crinoids: Rowley, 16; Worthen, 6; Wachsmuth, 2.
 Distribution of Crinoidea, 1851: Yandell, 1.
- CRUSTACEA. Refer also to TRILOBITA and OSTRACODA.
 Crustaceans from the Paleozoic. Miller, S. A., 16.
 Crustaceans from the Clinton group: Vodges, 1.
 Bibliography of Paleozoic Crustacea: Vodges, 3A, 4, 5A, 5B, 7.
 Description of two new species of Crustacea: Worthen 6.
- CYSTOIDEA.
 New species of cystoids: Rowley, 16.
 New Siluric Cystoidea: Schuchert, 14.
 Siluric and Devonian Cystoidea: Schuchert, 15.
- ECHINODERMATA. Refer also to BLASTOIDEA, CRINOIDEA, ECHINOIDEA, and EDRIOASTEROIDEA.
 Echinodermata of upper Coal Measures: Butts, 3.
 Paleozoic Echinodermata: Hambach, 2.
 Echinodermata from Coal Measures and sub-Carboniferous: Miller, S. A., 7.
 Echinodermata: Miller, S. A., 12, 16.
 Remarkable echinoderm, *Melonites*: Norwood, J. G., 1.
 Echinodermata from sub-Carboniferous: Rowley, 8.
 Echinodermata from Silurian: Rowley, 21, 22.
- ECHINOIDEA.
Melonites multipora: Engelman, 2.
 Recent and fossil *Pedicellariae*: Geis, 1.
Melonites multiporus: Jackson, 1.
 Palaeochinoidea: Jackson, 2.
 A synopsis of American Paleozoic echinoids: Keyes, 17A.
 A revision of the Paleozoic Palaeochinoidea: Klem, 2.
- EDRIOASTEROIDEA.
 Ophiuroid remains of Pennsylvanian age: Weller, J. M., 4.
- EURYPTERID.
 Cambrian Eurypterid of Missouri: Beecher, 2.
- FAUNAS. Arranged alphabetically by formations, periods, etc.
 Paleontology of the Alexandrian series: Savage, 4.
 Auburn chert fauna: Branson, 1; Randall, 1.
 Fauna of the Bailey limestone: Tansey, 1.
 Bailey limestone fauna: Weller, S., 27.
 Bainbridge fauna: Ball, J. R., 1, 4, 5, 6, 10.
 Niagara limestone (Bainbridge) fauna: Rowley 24.
 Beauvais sandstone fauna: Croneiss, 1.
 Bethany Falls limestone fauna: McCourt, 1.
 Fauna of basal Bonnetterre: Lochman, 1, 1A, 2.
 Bonnetterre dolomite fauna: Weller, S., 27.
 Brassfield fauna: Ball, J. R., 1.
 Fauna at base of Burlington: Keyes, 4.
 Burlington fauna: Moore, R. C., 2.
 Fossil collecting in Burlington limestone: Rowley, 7.
 Fauna of Burlington limestone at Louisiana: Rowley, 18.
 Burlington fauna in Pike Co.: Rowley, 24.
 Burlington fauna in Ste. Genevieve Co.: Weller, S., 27.
 Bushberg sandstone fauna: Weller, S., 27.
 Cambrian of St. Francois Co.: Beecher, 1.
 Carboniferous fossils: Meek, 3.
 Fossils from Carboniferous limestone: Hall, 10.
 Carboniferous fossils: Gurley, 1, 2.
 Crinoidal horizon in upper Carboniferous: Keyes, 59.
 Faunules of some western Carboniferous formations: Williams, J. S., 6.
 Cement City limestone fauna: McCourt, 1.
 Chanute shale fauna: McCourt, 1.
 Chattanooga shale fauna: Moore, R. C., 2.
 Faunal succession of the Chester group: Weller, S., 25.
 Chouteau limestone fauna: Moore, R. C., 2.
 Range of Chouteau fossils: Rowley, 10.
 Chouteau limestone fauna: Rowley, 24.
 Origin of Chouteau fauna: Williams, H. S., 4.
 Debacle of Williams' Chouteau fauna: Keyes, 115A.
 Cherokee shale fauna: Girty, 2.
 Cherryvale shale fauna: McCourt, 1.
 Coal Measures: Beede, 2, 4.
 Compton limestone fauna: Moore, R. C., 2.
 Cooper limestone fauna: Greger, 15.
 Cotter formation fauna: Cullison, 5.
 Cotter formation fauna: Weller, S., 27.
 Davis formation fauna: Weller, S., 27.

- Decorah shale fauna: Weller, S., 27.
 Devonian faunas: Branson, 11, 12.
 Middle Devonian faunas: Branson, 13.
 Relationship of upper Devonian and lower Mississippian: Branson, 16.
 Devonian *Megistocrinus* zone: Keyes, 124.
 Fossils from Devonian and Subcarboniferous: Rowley, 14, 17.
 Circuminsular Devonian fauna: Weller, S., 1.
 Correlation of Devonian faunas: Weller, S., 3.
 Correlation of Devonian and Mississippian faunas: Weller, S., 17.
 Faunas of upper Devonian: Williams, H. S., 1.
 Douglas formation fauna: Girty, 2.
 Drum limestone fauna: McCourt, 1; Sayre, 1.
 Dutchtown fauna of southeast Missouri: Cullison, 3.
 Eminence formation fauna: Bridge, 6.
 Fern Glen formation fauna: Moore, R. C., 2; Weller, S., 18, 27.
 Fernvale limestone fauna: Born, 1; Weller, S., 27.
 Gasconade dolomite fauna: Bridge, 6; Weller, S., 27.
 Fauna of Girardeau limestone and Edgewood formation: Savage, 1A.
 Glen Park limestone fauna: Moore, R. C., 2; Weller, S., 27.
 Golconda limestone fauna: Weller, S., 27.
 Grand Tower limestone fauna: Weller, S., 27.
 Grassy Creek shale invertebrate fauna: Greger, 16.
 Hannibal shale fauna: Moore, R. C., 2; Rowley, 24.
 Henrietta formation fauna: Girty, 2.
 Hertha limestone fauna: McCourt, 1.
 Iola limestone fauna: McCourt, 1.
 Jefferson City formation fauna: Weller, S., 27.
 Kansas City formation fauna: Girty, 2.
 Keokuk limestone fauna: Moore, R. C., 2; Rowley, 24; Weller, S., 27.
 Kimmswick fauna: Bradley, J. H., Jr., 2; Weller, S., 27.
 Trenton limestone (Kimmswick) fauna: Rowley, 24.
 Kinderhookian trilobites: Andrews, D. A., 1.
 Kinderhookian fauna: Branson, 9, 20, 38, 39, 42; Keyes, 30, 46; Moore, R. C., 2.
 Three Kinderhook fossils: Rowley 2.
 Kinderhook faunal studies: Weller, S., 8, 9, 10, 15, 16.
 Northern and southern Kinderhook faunas: Weller, S., 14.
 Ladore shale fauna: McCourt, 1.
 Lansing formation fauna: Girty, 2.
 Fauna of Little Saline limestone: Stewart, G. A., 1; Weller, S., 27.
 Vertical range of fossils at Louisiana: Rowley, 15.
 Fauna of Louisiana limestone: Moore, R. C., 2; Rowley, 24; Williams, J. S., 8.
 Hudson River shale (Maquoketa): Rowley, 24.
 Maquoketa shale fauna: Weller, S., 27.
 Fauna of residual Mississippian of Phelps Co.: Bridge, 2.
 Fossil fauna (Mississippian) at Springfield, Missouri: Weller, S., 2.
 Northveiv formation fauna: Moore, R. C., 2.
 Osage fauna: Keyes, 132.
 New genera and species from upper Paleozoic: Rowley, 19.
 Paleozoic fossils, 1863: Shumard, 8.
 Western extension of some Paleozoic faunas in southwestern Missouri: Weller, S., 23.
 Paleozoic faunas of northern Arkansas: Williams, H. S., 4B.
 Upper Paleozoic faunas: Williams, H. S., 5.
 Pawnee limestone fauna: McCourt, 1.
 Ammonoid fauna from lower Pennsylvanian: Miller, A. K., 1.
 Plattin limestone fauna: Weller, S., 27.
 Plattsburg limestone fauna: McCourt, 1.
 Pleasanton formation fauna: Girty, 2; McCourt, 1.
 Late Pleistocene vertebrate fauna from Herculaneum: Olson, 1.
 Post Pliocene shells of *Lupus*: Sampson, 6.
 Pierson limestone fauna: Moore, R. C., 2.
 Powell formation fauna: Cullison, 5; Weller, S., 27.
 Raytown limestone fauna: McCourt, 1.
 Reeds Spring limestone fauna: Moore, R. C., 2.
 Renault formation fauna: Weller, S., 27.
 Roubidoux formation fauna: Bridge, 6; Weller, S., 27.
 Rich Fountain formation fauna: Cullison, 5.
 Ste. Genevieve limestone fauna: Weller, S., 24, 27.
 St. Joe limestone fauna: Moore, R. C., 2.
 St. Laurent limestone fauna: Weller, S., 27.
 St. Louis limestone fauna: Hinchey, 2; Weller, S., 27.
 Saverton shale fauna: Moore, R. C., 2.

- Sedalia limestone fauna: Moore, R. C., 2.
- Shawnee formation fauna: Girty, 2.
- Short Creek oolite fauna: Moore, R. C., 2.
- Silurian of southeast Missouri: Ball, J. R., 2.
- Spergen limestone fauna: Weller, S., 27.
- Paleontology of Spergen limestone: Yenne, 1.
- Sub-Burlington fauna at Burlington: Winchell, A., 1.
- New species from Sub-Carboniferous: Rowley, 20.
- Thebes sandstone fauna: Savage, 7.
- Theodosia formation fauna: Cullison, 5.
- Van Buren formation fauna: Bridge, 6.
- Wabaussee formation fauna: Girty, 2.
- Warsaw formation fauna: Moore, R. C., 2; Weller, S., 27.
- Winterset limestone fauna: McCourt, 1.
- FORAMINIFERA.**
- Missouri *Triticites* of the northern Mid-Continent: Burma, 1.
- Pennsylvanian Fusulinidae of Illinois: Dunbar, 2, 3.
- Pennsylvanian Foraminifera: Girty, 2.
- Lower Pennsylvanian fusulinids: Johnson, C. H., 1.
- Some Fusulinids from the Missouri series of Kansas: Merchant, 1.
- Fusulinid *Wedekindellina* in mid-Pennsylvanian: Newell, 2.
- FOSSILS, GENERAL.**
- Footprint records from the Paleozoic and Mesozoic of Missouri, etc.: Branson, 24.
- Collecting fossils in ... midwest: Bridge, 9.
- Bones of large mammals in drift: Broadhead, 10.
- Fossil bones from Missouri: Chaloner, 1.
- Origin of composite and incomplete internal moulds and their possible use as criteria of structure: Cullison, 4.
- Fossils retaining original color markings: Greger, 6, 10, 14.
- Catalogue of Missouri fossils: Hambach, 3.
- Fossil remains in southwest Missouri: Lewis, J. L., 1.
- Fossils from Kansas City and vicinity: Lykins, 1.
- Fossils from western states, 1859: McChesney, 1.
- Catalogue of fossils of Missouri: Meek, 2.
- Paleozoic shells: Meek, 4.
- Fossils: Miller, S. A., 11, 13, 14, 17, 18.
- Regarding human footprints in solid limestone: Owen, D. D., 2.
- Catalogue of geological specimens collected by D. D. Owen: Owen, D. D., 6.
- Dry dredging in the Mississippian area: Schuchert, 8.
- Index fossils of North America: Shimer, 1.
- New fossils from the coal measures, 1858: Swallow, 8.
- New fossils from Carboniferous and Devonian: Swallow, 10.
- Catalogue of A. H. Worthen's Paleozoic fossils: Worthen, C. K., 1.
- GASTEROPODA.** Arranged alphabetically by genus, formation, period, etc.
- Aclisina* from St. Louis, Pennsylvanian outlier: Knight, 8.
- Bellerophon* of the Carboniferous: Norwood, J. G., 5.
- Carboniferous *Bellerophon*: Weller, J. M., 1.
- Bellerophon*, *Pleurotomaria*, *Macrocheilus*, *Natica*, and *Loxonema* of the Carboniferous: Norwood, J. G., 5.
- Devonian gasteropods: Branson, 12.
- Color marked *Euconospira* from Pennsylvanian: Greger, 14.
- Euomphalidae from St. Louis, Pennsylvanian outlier: Knight, 16.
- Gygopleuroid gasteropods: Knight, 5.
- Holopea symmetrica*: Knight, 12.
- Loess fossils: Keyes, 1.
- Post-Pliocene shells of *Lupus*, Missouri: Sampson, 6.
- Loxonema*, of the Carboniferous: Norwood, J. G., 5.
- Macrocheilus* of the Carboniferous: Norwood, J. G., 5.
- Gasteropods of Missouri: Keyes, 9.
- Natica* of the Carboniferous: Norwood, J. G., 5.
- Growth stages in *Naticopsis altonensis*: Girty, 1.
- Neritidae from St. Louis, Pennsylvanian outlier: Knight, 15.
- Ophileta*, *Polygrata*, and *Lecanospira*: Ulrich, 31A.
- Lower Ordovician gasteropods: Bridge, 6; Cullison, 5.
- Paleozoic gasteropod genotypes: Knight, 18.
- Paleozoic Gasteropoda: Ulrich, 32.
- Pennsylvanian gasteropods: Girty, 2.
- Gasteropods of the Pennsylvanian outlier at St. Louis: Knight, 7, 8, 10, 11, 14, 15, 16, 17.
- Pennsylvanian gasteropods: Knight, 4.
- Gasteropods of Pike Co.: Rowley, 24.

Pleurotomaria of the Carboniferous:
Norwood, J. G., 5.

Platyceratidae from St. Louis, Pennsylvanian outlier: Knight, 16.

Pseudozygopleurinae from St. Louis, Pennsylvanian outlier: Knight, 7.

Ptychospira sexplicata: Greger, 4.
Lower Silurian gasteropoda: Ulrich, 14.

Genus *Soleniscus*: Knight, 9.

Streptacis from St. Louis, Pennsylvanian outlier: Knight, 8.

Subulitidae from St. Louis, Pennsylvanian outlier: Knight, 10.

Trocho-Turbinidae from St. Louis, Pennsylvanian outlier: Knight, 14.

Turritellidae from St. Louis, Pennsylvanian outlier: Knight, 17.

GRAPTOLITIC.

Graptolites from the lower Silurian:
Schuchert, 10.

HYDROZOA.

Devonian Hydrozoa: Branson, 12.

INSECTA.

Older fossil insects: Scudder, 1.

Index and bibliography of fossil insects: Scudder, 2, 3.

Fossil cockroaches: Scudder, 4.

INVERTEBRATES. Refer also to PALEONTOLOGY, GENERAL.

Carboniferous invertebrates: Girty, 3.

Invertebrates from the Carboniferous:
Worthen, 5, 7.

Invertebrate paleontology of Pennsylvanian of Missouri: Girty, 2.

Bibliographic index of North American Carboniferous invertebrates: Weller, S., 4.

MAMMALIA. Refer also to MAN, PREHISTORIC.

Arranged alphabetically by animals.

Fossil skull of genus *Bos*: De Kay, 1.

Bos pallasi, De Kay, from New Madrid: Harlan, 4.

Extinct species of American ox: Leidy, 1.

Edentate *Orycterotherium missouriense* in Benton Co.: Harlan, 3, 5.

Fossil horse: Broadhead, 7, 11.

Dr. Koch and his mastodon: Andrews, 1.

Jackson Co. mastodon: Ballard, 1.

The mastodon: Broadhead, 95.

Fossil bones from Missouri: Chaloner, 1.

Dr. Koch's evidence of contemporaneity of man and mastodon in Missouri: Dana, J. D., 9.

Mastodon seen at Galena, Missouri: Desor, 1.

Mastodon remains of Koch collection: Harlan, 6.

Koch collection of Mastodon bones:
Hays, I., 1-3.

Dental system of mastodon: Horner, 1, 4.

Remains of mastodon collected at St. Louis: Horner, 2, 3.

Mastodon remains: Koch, A. K., 1-3, 10, 12. (See also 4-9, 11.)

Mastodon (?) and *Elephas primigenius*: Richardson, 1.

Discovery of mastodon tusk: West, H. H., 1.

Mastodon bones found in Benton Co.: Whipple, 1.

MAN, PREHISTORIC.

"Pre-historic" man in southeastern Missouri: Cronels, 3.

Dr. Koch's evidence of contemporaneity of mastodon and man in Missouri: Dana, J. D., 1.

Stone-age man of Crawford Co.: Chapman, 1.

Early man in eastern Missouri: Adams, R. M., 1.

Jacobs Cavern, McDonald Co.: Gould, 1.

Regarding human footprints in solid limestone: Owen, D. D., 2.

Yuma and Folsom artifacts: Renaud, 1.

MOLLUSCA. Refer also to CEPHALOPODA, GASTEROPODA, PELECYPODA, SCAPHOPODA.

Pleistocene Mollusca: Greger, 13, 21.

Loess fossils: Keyes, 1; Miller, 17.

Preliminary list of Mollusca of Missouri: Sampson, 5A.

Description of fifty-one species of Mollusca: Worthen, 6.

OSTRACODA.

Ostracodes from Snyder Creek shale: Becker, 1.

Occurrence and stratigraphic distribution of Paleozoic ostracodes: Cooper, C. L., 2.

Bairdia clorensis Cooper, new name for *B. sinuosa* Cooper, 1941: Cooper, C. L., 3.

New ostracodes from the Golconda formation: Cronels, 2A.

Pennsylvanian ostracodes: Delo, 1.

Revision of the genus *Schmidtella*: Drake, 1.

Ostracodes from the Maquoketa shale: Keenan, 1.

Carboniferous ostracodes: Kellet, 2.

Ostracodes from the Henrietta formation: Knight, 1, 2.

Ostracode genus *Hollinella*: Knight, 6.

Ostracoda from basal Mississippian: Morey, 1.

Ostracoda from Chouteau: Morey, 2.

- Paleozoic Ostracoda: Ulrich, 9, 16, 18, 19, 27.
Beecherella, of lower Helderberg: Ulrich, 10.
 Lower Silurian Ostracoda: Ulrich, 13.
- PALEOBOTANY.** Arranged alphabetically by genus, formation, period, etc.
 Seed-bearing Annularia and Annularia foliage: Elias, 1.
 Carboniferous floras: White, C. D., 1, 6, 7.
 Paleozoic charophyta: Peck, 2, 3.
Cauloxylon ambiguum from Reeds Spring formation: Cribbs, 4, 5.
 Coal floras: Keyes, 48.
 Coal floras in Henry Co.: Round, 1.
 Coal Measures fucoids: Broadhead, 8.
Cordaites and related genera: Lesquereux, 1.
 Fossil *Dicotyles* from Missouri: LeConte, 2.
 Taeniopteroid fern: White, C. D., 2.
 Fucoids from the Coal Measures: Broadhead, 8.
 Fossil leaves from southeastern Missouri: Duckworth, 1.
 Lepidodendron, Omphalophloios type: White, C. D., 4.
 Petrified logs from southwestern Missouri: Clark, E. L., 1.
 Pennsylvanian flora: Noe, 1.
 Pennsylvanian Pteridospes: Arnold, C. A., 1.
Picea canadensis, type of Pine: Hansen, 1.
 Pityean plant from Reeds Spring formation: Cribbs, 67.
 Pteridospermous plant from Pennsylvanian: Arnold, C. A., 1; Cribbs, 8.
 Reeds Spring formation fossil plants: Clark, E. L., 1; Cribbs, 1, 2, 4-8.
 Fossil seed plant: Cribbs, 8.
 Tertiary silicified wood: Call, 2.
 Structural trends of the Trochilidaceae: Peck, 5A.
 Fossil wood: Cribbs, 3.
 Fossil wood cast in diaspore clay: Keller, 4.
- PALEONTOLOGY, GENERAL.**
 Pennsylvanian micropaleontology: Bailey, 1.
 Review of Contributions to Paleontology: Broadhead, 93.
 Invertebrate paleontology of Pennsylvanian of Missouri: Girty, 2.
 Paleontology of New York: Hall, 8.
 Bibliography of North American paleontology: Keyes, 7.
 Description of invertebrates from the Carboniferous: Meek, 13.
 Paleontology of Illinois: Meek, 3, 4, 6, 7, 10, 11, 14, 15.
 North American paleontology: Miller, S. A., 4.
 North American paleontology for amateurs: Miller, S. A., 5.
 Paleontology: Miller, S. A., 9.
 Missouri paleontology: Rowley, 22.
 Indiana paleontology: Rowley, 23.
 Devonian paleontology: Schuchert, 16.
 Index fossils of North America: Shimer, 1.
 Paleontology of Missouri, 1855: Shumard, 3.
 Paleozoic fossils of North America: Shumard, 11.
 Systematic paleontology, late Cambrian-Ordovician: Ulrich, 29.
 Bibliographic index of North America Carboniferous invertebrates: Weller, S., 4.
 Scope of paleontology and its value to geologists: Williams, H. S., 3.
 Fossil invertebrates: Worthen, A. H., 5, 7.
 Paleontology of Spargen limestone: Yenne, 1.
- PELECYPODA (LAMELLIBRANCHIATA).**
 Pelecypod from Coal Measures: Beede, 1.
 Devonian pelecypods: Branson, 12.
 Pennsylvanian pelecypods: Girty, 2.
 Lamellibranchs of Missouri: Keyes, 9.
 Pennsylvanian pelecypod showing color markings: Knight, 4.
 Lower Mississippian pelecypods: Moore, R. C., 2.
 Late Paleozoic pelecypods; Pectinacea: Newell, 3.
 Lamellibranchs in the Louisiana limestone: Rowley, 24.
 Pelecypoda of the Louisiana limestone: Williams, J. S., 2.
- PISCES.**
 Pisces from lower Mississippian: Branson, 40.
 Devonian fishes: Branson, 3, 5, 12, 20, 49.
 Brain and skull of Paleoniscid fish from Pennsylvanian of western Missouri: Case, E. C., 2.
 Paleoniscid brain case: Eaton, 1.
Listracanthus eliasi from Pennsylvanian of Nodaway Co.: Hibbard, 1.
 Fishes from Carboniferous and Devonian of the United States: Leidy, 2.
 Fishes from Carboniferous of Missouri: Leidy, 3.
 Paleozoic fishes: Newberry, 8.
 Fossil fishes: St. John, 1, 2.
- PORIFERA.**
 Sponges from lower Silurian of Minnesota: Schuchert, 10.
 Sponges of the Devonian and Carboniferous: Ulrich, 4.

Lower Ordovician sponges: Cullison, 5.

Porifera of Missouri: Keyes, 8.

REPTILIA.

Dinosaur from Cretaceous of Missouri: Branson, 50.

New sauropod dinosaur from Cretaceous of Missouri: Gilmore, C., 1.

Discovery of *Ichthyosaurus* in Missouri: Harlan, 1, 2.

Saurian of Missouri: Harlan, 2.

Dr. Koch's *Missourium*: Hoy, 1.

Description of *Missourium*: Koch, A. K., 4-8, 10, 11.

Description of *Hydrargos*: Koch, A. K., 9.

SCAPHOPODA.

Pennsylvanian scaphopods: Girty, 2.

Troopella typa, Devonian scaphopod: Greger, 22.

TRILOBITA. Refr also to CRUSTACEANS.

Arranged alphabetically by genus, formation, etc.

Asaphus polypleurus: Green, J., 1.

Pathologic pygidium of upper Cambrian: Lochman, 3.

Carboniferous trilobites: Vogdes, 1-3, 5, 6.

Trilobites of upper Coal Measures at Kansas City: Hare, 1.

Crustacea from the Clinton group: Vogdes, 1.

Genotype of *Dalmanites*: Delo, 3.

Dalmanites from Silurian of southeast Missouri: Ball, J. R., 14.

Devonian trilobites: Branson, 12.

Trilobite from the Louisian limestone: Rowley, 24.

Color pattern on a Mississippian trilobite: Williams, J. S., 3.

Trilobites of Missouri: Keyes, 8.

Lower Ordovician trilobites: Bridge, 6; Cullison, 5.

Phacopid trilobites: Delo, 4-8; Weller, J. M., 16.

Bibliography of Paleozoic Crustacea: Vogdes, 4.

Pennsylvanian trilobites: Girty, 2.

Pennsylvanian trilobite from Missouri: Williams, J. S., 4.

Proetus from the Chouteau limestone: Vogdes, 6.

Locomotive habits of some trilobites: Delo, 2.

VERTEBRATA. Refer also to MAMMALIA, PISCES and REPTILIA.

Bibliography and catalogue of fossil vertebrata of North America: Hay, O. P., 1.

Fossil vertebrates of Missouri: Keyes, 9.

Vertebrates from sub-Carboniferous limestone: Newberry, 2, 4.

Paleozoic fishes: Newberry, 8.

Late Pleistocene vertebrate fauna from Herculaneum: Olson, 1.

WORMS (VERMES).

Scolecodonts from the Decorah: Cro-neis, 2.

Pennsylvanian Vermes: Girty, 2.

Physiography



CAVES.

- Mosby sandstone Cave, Clay Co.: Bartle, 3.
- Vadose and phreatic features of caverns: Bretz, 1.
- Caves in Missouri, 1863: Broadhead, 2, 6, 36.
- Gravois Mill (Morgan Co.) Cave and Spring: Broadhead, 58.
- Origin of limestone caverns: Davis, W. M., 2.
- Salt peter Cave, map and geology: Detweiler, 1.
- Marble Cave (Since known as Marvel cave): Emery, 1.
- Jacobs Cavern, McDonald Co.: Gould, 1.
- Cave region of Ozarks and Black Hills: Owen, L. A., 1.

CROWLEY'S RIDGE.

- Geology of Crowley's Ridge: Branner, J. C., 1.
- Geographic development of Crowley's Ridge: Marbut, 1.
- Evolution of southeastern Missouri lowlands: Marbut, 10, 11.
- Crowley's Ridge: Mathes, 1, 2, 3.
- Relationship of Pleistocene to pre-Pleistocene of Crowley's Ridge: Salisbury, 1.
- The loess of Crowley's Ridge, Arkansas: Shimek, 3.

GLACIAL PHENOMENA.

- Extent of glaciation: Antevs, 1.
- Iowan drift: Alden, 2.
- Boulders south of the Missouri: Broadhead, 82.
- Surface deposits of western Missouri: Broadhead, 138.
- Glacial boulders along Osage River: Buckley, 7.
- Traces of a glacier at Kansas City: Case, E. C., 1.
- Essay on erratic rocks of North America, 1848: Christy, 1.
- Pre-glacial valley in Jackson Co.: Clair, 1.
- Glacial drift in St. Louis and vicinity: Drushel, 1, 2; Fenneman, 4.
- Buried river channels in northeastern Missouri: Gordon, 2.
- History of the lower Missouri: Greene, F. C., 2.

- Pre-glacial drainage pattern of northwest Missouri: Greene, F. C., 7.
- Pennsylvanian stratigraphy of Missouri: Hinds, 5.
- Leavenworth-Smithville Folio: Hinds, 6.
- Nebraskan-Kansan drift boundary: Holmes, 1.
- Loess and drift of Missouri: Holmes, 2.
- Glacial striae south of Missouri River: Jewett, 1.
- Some features of the Kansas drift in southern Iowa: Kay, G. F., 1.
- Some large boulders in the Kansan drift of southern Iowa: Kay, G. F., 2.
- Pre-Illinoian Pleistocene geology of Iowa: Kay, G. F., 3.
- Bibliography of Pleistocene geology of Iowa: Kay, G. F., 4.
- Missouri River loess and Kansan drift: Keyes, 72.
- Glacial tills and iceberg drifts: Keyes, 96.
- Old glacial tills of Missouri: Keyes, 152.
- Boulders of copper and glacial striae in central Missouri: Kirkpatrick, 1.
- Pre-glacial valley of the Mississippi: Leverett, 3.
- Outline of the Pleistocene history of Mississippi Valley: Leverett, 2A.
- Illinois glacial lobe: Leverett, 2.
- Glacial deposits of Missouri: Leverett, 3.
- Nebraskan drift in Missouri: Leverett, 4; Shipton, 2.
- Geology of Jackson Co.: McCourt, 1.
- Pleistocene history of northeastern Iowa: McGee, 2.
- Glacial geology of St. Louis: Radebaugh, 1.
- Middle Mississippi River in the Pleistocene: Robertson, P., 2, 3, 4, 6.
- Sand-boulders in drift, or subaqueous origin of drift: Spencer, J. W. W., 4.
- The Missouri Coteau and its moraines: Todd, 2A, 7A.
- Relation of loess to drift in southwestern Iowa: Todd, 2C.
- Striations of rocks by river ice: Todd, 3, 4.

Drainage of the Kansas ice sheet: Todd, 7D.

Diversion of Grand and Missouri Rivers: Todd, 9, 10.

Striated rocks in St. Francois River Valley: Wentworth, 3.

Glacial drift in St. Louis: Wheeler, 4.

Source of boulders in glacial drift: Wilkerson, 1.

Glacial boundary in Illinois, etc.: Wright, G. F., 1.

Another glacial wonder, Tuscumbia erratics: Wright, G. F., 3.

INTRENCHED STREAMS.

Osage River and Ozark uplift: Davis, W. M., 1.

Cote Sans Dessein and Grand Tower: Marbut, 9.

Intrenched and incised meanders: Tarr, 23.

Osage River and its meanders: Winslow, 13.

LOESS. Refer also to SEDIMENTARY ROCKS under PETROLOGY AND PETROGRAPHY, and to LOESS under STRATIGRAPHY.

Origin of loess: Broadhead, 87.

The loess: Broadhead, 137.

Surface deposits of western Missouri: Broadhead, 138.

Loess of North America, 1882: Call, 1.

Loess, subaerial or subaqueous: Child, 1.

Chart of the distribution of loess: Huntington, E., 1.

Eolian origin of loess: Keyes, 42.

Missouri River loess and Kansan drift: Keyes, 72.

Water table of the loess: Keyes, 89.

Loess in St. Louis and St. Louis Co.: Nason, 1; Robertson, P., 2.

The loess: Owen, L. A., 2, 3, 4, 5.

Lower Mississippi Valley loess: Russell, 1.

The loess of Crowley's Ridge, Arkansas: Shimek, 3.

Richthofen's theory of loess: Todd, 2.

Aqueous loess: Todd, 8.

Problems of loess in Missouri Valley: Wright, G. F., 2, 4.

LOWLANDS.

Geology of Stoddard Co.: Farrar, 3.

Evidence of rock-plains in southeastern Missouri: Foster, P. W., 1.

Evolution of southeastern lowlands: Marbut, 10, 11.

Fresh water morasses of the United States: Shaler, 1.

NATURAL BRIDGES.

Hahatonka bridge: Arnold, A., 3.

Stream piracy and natural bridges in the loess of southeastern Missouri: Dake, 4.

Submerged lands of the State of Missouri: Rozier, 1.

Niangua River natural bridge: Swallow, 1.

OZARK REGION.

General physiography: Adams, G. I., 1.

Fayetteville Folio: Adams, G. I., 3.

Geology of Miller Co.: Ball, S. H., 1.

Initial dips peripheral to resurrected hills: Bridge, 5.

Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.

Geology of the Granby area: Buckley, 11.

Geology of the disseminated lead district of St. Francois and Washington Cos.: Buckley, 22.

Analyzing and mapping natural landscape factors of the Ozark province: Cozzens, 2.

Physical profiles of the Ozark province: Cozzens, 3.

Subterranean stream piracy in the Ozarks: Dake, 13.

Geology of the Potosi-Edgehill Quadrangles: Dake, 15.

Buried and resurrected hills of the central Ozarks: Dake, 16.

Osage River and the Ozark uplift: Davis, W. M., 1.

Crystalline rocks of the plains: Gordon, 3.

River valleys of Ozark plateau: Hershey, 2.

Correlations in the Ozark region: Hershey, 7.

Peneplains in the Ozark highland: Hershey, 9.

Guidebooks: Kansas Geological Society, 1, 3.

Characteristics of Ozark mountains: Keyes, 12.

Report on the Mine La Motte Sheet: Keyes, 29.

Late Paleozoic fossils on summit of Ozarks: Keyes, 83.

Geology of the Rolla Quadrangle: Lee, W., 2.

Relief in southeastern Missouri: Lonsdale, 1.

Topography of granite and porphyry region: Lonsdale, 2.

Late Cretaceous and Cenozoic changes of level in the Ozark region: Maddox, 1.

Physiography of the Ozark region: Marbut, 14.

Geology of Morgan Co.: Marbut, 20.

Physical geology of area near Humansville: Rhodes, 1.

- Geography of Ozark highland: Sauer, 1.
 Ozark Mountains, 1853: Schoolcraft, 5.
 Das Ozarkland: Schottenloher, 1.
 Geology of Greene Co.: Shepard, E. M., 2.
 Joplin District Folio: Smith, W. S. T., 2A.
 Meanders on the northern slope of the Ozark plateau: Tarr, 22.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Report on the Iron Mountain Sheet: Winslow, 15.

PENEPLAINS.

- Physical profiles of the Ozark provinces: Cozzens, 3.
 Peneplains of the Ozark highland: Hershey, 9.
 Geography of Ozark highland: Sauer, 1.
 Intrenched and incised meanders: Tarr, 22.

PHYSIOGRAPHY, GENERAL.

- Physical geography of Missouri: Davis, W. B., 1; Loughbridge, 1; Swallow, 14.
 Geography of Missouri: Emerson, 1.
 Physiography of eastern United States: Fenneman, 5.
 Physical geography and geology of United States: Fenneman, 6.
 Physiographic types: Gannett, 3.
 Country between Missouri and Mississippi Rivers: Hawn, 1.
 Physiography of Missouri: Keyes, 90; Marbut, 13, 17.
 Outlines of Missouri geology: Keyes, 151.
 Physical features of Missouri: Marbut, 3.
 Summary of the geology of Missouri: Peery, 1.
 Geology of valley of Mississippi, 1848: Prout, 2.
 Geological sketch of State of Missouri: Swallow, 19.
 Geology, etc., of Missouri: Swallow, 16, 20.
 Lead and zinc deposits of Missouri: Winslow, 14.

PRAIRIE REGION.

- Prairies and barrens: Bourne, 1.
 Geology of the St. Louis Quadrangle: Fenneman, 4.
 Geology of Vernon Co.: Greene, F. C., 3.
 Leavenworth-Smithville Folio: Hinds, 6.
 Geology of the Calhoun Sheet: Marbut, 4.

- Geology of the Clinton Sheet: Marbut, 5.
 Geology of the Huntsville Quadrangle: Marbut, 6.
 Geology of the Lexington Sheet: Marbut, 7.
 Geology of the Richmond Quadrangle: Marbut, 8.
 Geology of Pike Co.: Rowley, 24.
 Origin of ravines on the prairies: Sawyer, 1.

RIVERS.

Mississippi.

- Story of Mississippi-Missouri: Claypole, 1.
 Ozark segment of Mississippi River: Flint, 5.
 Superficial deposits along Mississippi River: Fowke, 1, 2.
 Physiographic development of the upper Mississippi Valley: Hershey, 6.
 Physics and hydraulics of Mississippi River: Humphreys, 1.
 Ecological cross-section of Mississippi River at St. Louis: Hus, 1.
 Shifting of the Mississippi River in relation to glaciation: Leverett, 5.
 Geographic development of Crowley's Ridge by Mississippi: Marbut, 1.
 Mississippi River and Crowley's Ridge: Matthes, 1, 2.
 Middle Mississippi River during the Pleistocene: Robertson, P., 4.
 Pleistocene terraces of the Mississippi River: Robertson, P., 6.
 The ancient Mississippi and its tributaries: Spencer, J. W. W., 1.
 Bridging of the Mississippi: Warren, 1.
 Geographic development of eastern part of Mississippi drainage: Westgate, 1.

Missouri.

- The Missouri River: Broadhead, 114.
 Story of Mississippi-Missouri: Claypole, 1.
 History of lower Missouri River: Freene, F. C., 2.
 Bluffs of Missouri River: Owen, L. A., 2.
 Occurrence and characteristics of Missouri River cutoffs: Parker, F. Y., 2.
 Annual deposit of Missouri River during post-Pliocene: Todd, 1.
 The terraces of the Missouri: Todd, 2B.
 Pleistocene history of the Missouri River: Todd, 7E.
 Glacial diversion of Missouri River: Todd, 10.
 Age of Missouri River: West, E. P., 2.

River planning in the Missouri basin:
Young, J. M., 1.

Osage.

Osage River and Ozark uplift: Davis,
W. M., 1.
Geology and improvement on Osage
River: Parker, F. Y., 1.
Osage River and its meanders: Wins-
low, 13.

SPRINGS. Refer also to WATER RE- SOURCES under ECONOMIC GEOLOGY.

Hahatonka, or Gunter Spring: Arnold,
A., 3.
The large springs of Missouri: Beck-
man, 3.
Meramec Springs: Black, 1.
Study of Missouri springs: Bolson,
1.
Ebb and flow springs: Bridge, 4.
Mineral springs: Broadhead, 4, 53;
Schweitzer, 1, 2, 3.
Gravois Mill (Morgan Co.) Cave and
Spring: Broadhead, 58.
Hydrography of larger springs of the
Ozarks: Doll, 1.
Large springs, the pirates of the
Ozarks: Doll, 2.
Large springs of the Ozarks: Fuller,
1; Meinzer, 1.
Influence of stratigraphy on emer-
gence of springs: Hopkins, 1.
Hahatonka Spring: Ross, B., 2;
Scherer, 1.
Spring systems of the Decaturville
Dome: Shepard, E. M., 5.
Oil springs in Missouri: Shumard, 10.

STREAM PIRACY.

Stream piracy and natural bridges in
the loess of southeast Missouri:
Dake, 4.
Subterranean stream piracy in the
Ozarks: Dake, 13.

Large springs, the pirates of the
Ozarks: Doll, 2.

TERRACES, RIVER.

Superficial deposits along Mississippi
River: Fowke, 1, 2.
Pleistocene terraces of Mississippi
River: Robertson, P., 4, 6.
Quaternary deformation in southeast-
ern Missouri: Shaw, 1.
Terraces of the Missouri: Todd, 2B.

VALLEYS.

Physiographic development of the
upper Mississippi Valley: Hershey,
6.
Geologic sketches of Mississippi Val-
ley: James, 1.
Pre-glacial valleys of the Mississippi
Valley, 1821: Nuttall, 2.
Bluffs of the Missouri River: Owen,
L. A., 2.
Cote Sans Dessein and Grand Tower:
Marbut, 9.

WEATHERING AND EROSION.

The pinnacles: Broadhead, 142.
Dolomitic glades of east-central Mis-
souri: Erickson, 1.
Decay of rocks geologically considered:
Hunt, 3.
Behavior of potassium and sodium
during soil formation: Jenny, 1.
Secular decay of granitic rocks: Keyes,
17.
Relation between rainfall and run-
off: Reger, 1.
Soils resulting from the disintegration
of particular rocks: Sheperd, 1.
Hummocks and boulders of decom-
position in southeastern Missouri:
Spencer, J. W. W., 2.
Effect of heat on granite and causes
of disaggregation of granite: Tarr,
1, 2.
Silicification of erosion surfaces: Dake,
15; Leith, 1; Tarr, 25.

Structural Geology



SEISMOLOGY.

- Rodney earthquake of August 20, 1934: Bradford, D. C., 1.
- Seismic history of Missouri: Bradford, D. C., 2.
- Microseisms and meteorology: Bradford, D. C., 3.
- Illinois earthquake of November 23, 1939: Birkenhauer, 1.
- New Madrid earthquake: Broadhead, 132; Fuller, 3, 5, 6.
- The southeastern Illinois earthquake of October 29, 1934: Dahm, 1.
- Charleston earthquake, 1886: Dutton, 1; Fuller, 5.
- Missouri earthquake of April 9, 1917: Finch, 1.
- Cause and periods of earthquakes in New Madrid area: Fuller, 2.
- Our greatest earthquake: Fuller, 4.
- Seismology in St. Louis: Goesse, 1.
- Seismic activity in the St. Marys fault region since 1910: Heinrich, R. R., 1.
- Seismicity in Missouri: Heinrich, R. R., 2.
- Seismic history of Missouri: Heinrich, R. R., 4.
- New Madrid earthquake region: Lyell, 1.
- Earthquake in the New Madrid region: Macelwane, 1.
- New Madrid earthquake not an earthquake: Macfarlane, 2.
- New Madrid earthquake centers: Morse, 1.
- Missouri earthquake of April 9, 1917: Paige, 1.
- Charleston, Missouri, Earthquake: Purdue, 1.
- Earthquakes of Aug. 29 and Sept. 1, 1930 in New Madrid region: Ramirez, 1.
- Nature and origin of microseisms at St. Louis: Ramirez, 2.
- Two recent earthquakes at New Madrid: Robertson, Florence, 1.
- Deep earthquakes: Robertson, Florence, 2, 4.
- Missouri earthquakes of Jan. 30, 1937: Robertson, Florence, 3.
- New Madrid and other earthquakes of Missouri: Sampson, 5.
- The New Madrid earthquake: Shepard, E. M., 7.

- Longitudinal wave-velocities in the Mississippi Valley: Walter, 1.
- Local earthquakes and crustal layering immediately south of St. Louis: Walter, 2.
- Illinois basin earthquake of Nov. 17, 1937: Westland, 1; Heinrich, R. R., 3.

STRUCTURAL GEOLOGY—GENERAL.

- Physiography and geology of the Ozarks: Adams, G. I., 1.
- Structural features of the Joplin district: Bain, 14.
- Structure of earths crust east and north of St. Louis: Birkenhauer, 2.
- Geology of Missouri: Branson, 8, 52.
- Geological history of Ozark uplift: Broadhead, 112, 134.
- Early diastrophic events in Ozarks: Dake, 14.
- Structural control of ore deposits in Tri-State district: Fowler, 9.
- Structural features of the Mississippi Valley region and their relation to mineralization: Giles, 2.
- Pre-Cambrian structure in Missouri: Graves, 2.
- Structural reconnaissance from old Monroe to Nauvoo: Krey, 1.
- Structural relation of the lead-zinc deposits of northern Arkansas: McKnight, 2.
- Post-Pennsylvanian denudation of the Ozark dome: Melton, 1.
- Pennsylvanian cycles in the northern Mid-Continent region: Moore, R. C., 2A, 2B.
- Osage River and Ozark uplift: Morris, W. M., 1.
- Bibliography of geologic structure maps and cross sections of areas in oil and gas states east of the Mississippi River and some producing states in the Mid-Continent region: Postley, 1.
- Structural features of Joplin district: Siebenthal, 1.
- Structural geology of parts of St. Louis and St. Louis Co.: Springfield, 1.
- Evidence of Pleistocene crustal movements in the Mississippi Valley: Todd, 7E.

STRUCTURES OF DIASTROPHIC ORIGIN.

- Fayetteville Folio: Adams, G. I., 3.
 Physiography and geology of Ozarks: Adams, G. I., 1.
 Geology of Miller Co.: Ball, S. H., 1.
 Structure of Mystic coal basin: Bain, 1.
 Structural features of the Joplin district: Bain, 14.
 Structure of earths crust east and north of St. Louis: Birkenhauer, 2.
 Geologic history of Ozark uplift: Broadhead, 112, 134.
 Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
 Geology of the Granby area: Buckley, 11.
 Oil and gas resources of Cass and Jackson Cos.: Clair, 3.
 Mechanics of the plains: Clarke, S. K., 1.
 Early diastrophic events in the Ozarks: Dake, 14.
 Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
 Osage River and Ozark uplift: Davis, W. M., 1.
 Geology of Stoddard County, Missouri: Farrar, 3.
 Geology of the St. Louis Quadrangle: Fenneman, 4.
 Thrust faults in southeastern Missouri: Flint, 3.
 Oil structures in Oklahoma-Kansas zinc-lead mining field: Fowler, 3.
 Structure of St. Louis and St. Louis Co.: Gleason, 2.
 Joint systems in St. Francois Mountains: Graves, 1.
 Oil and gas pools of western Missouri: Greene, F. C., 4.
 Subsurface geology of northeast Missouri: Grohskopf, 3.
 St. Marys fault region: Heinrich, R. R., 1.
 Ouachita Mountains (and Ozarks): Hill, R. T., 1.
 Leavenworth-Smithville Folio: Hinds, 6.
 Lead and zinc deposits (Ozark uplift): Jenney, 1.
 Lead and zinc fields of Ozark uplift: Johnson, W. H., 1.
 Characteristics of the Ozark Mountains: Keyes, 12.
 Cap-au-Gres uplift: Keyes, 43, 77.
 Diastrophic aspect of Aux Vases sandstone: Keyes, 80.
 Structural reconnaissance of the Mississippi Valley Area: Krey, 1.

- Geology of the Rolla Quadrangle: Lee, W., 2.
 Geology of northwestern Missouri: McQueen, 12.
 Forest City Basin. McQueen, 13; Lee, 3; Osborn, 1; Potter, P. G., 1.
 The Lincoln fold: McQueen, 13.
 Geology of Morgan Co.: Marbut, 15.
 Post-Pennsylvanian denudation of the Ozark dome: Melton, 1.
 Osage River and Ozark uplift: Morris, W. M., 1.
 The Forest City Basin: A comparison with the Illinois Basin: Osborn, 2.
 Eureka Springs-Harrison Folio: Purdue, 2.
 Geology of Pike Co.: Rowley, 24.
 Structural history of Cap-au-Gres faulted flexure: Rubey, 2.
 King-Ritter fault: Ruhl, 1.
 Pegmatite Hill, (Camden Co.): Ruhl, 2.
 Structural features of Joplin district: Siebenthal, 1.
 Quaternary deformation in southeast Missouri: Shaw, 1.
 Geology of Greene Co.: Shepard, E. M., 2.
 Spring system of the Decaturville dome: Shepard, E. M., 5.
 Joplin District Folio: Smith, W. S. T., 2A.
 Structural geology of parts of St. Louis and St. Louis Co.: Springfield, 1.
 Folding in vicinity of Commerce, Missouri: Stewart, D. R., 2.
 Origin of Decaturville dome. Tarr, 38.
 Geology of Moniteau Co.: Van Horn, F. B., 1.
 Geology of Ste. Genevieve Co.: Weller, S., 27.
 Mineola dome: Whorton, 1.
 Lead and zinc deposits of Missouri: Winslow, 14.
 Occurrence of oil and gas in Missouri: Wilson, 2.

OTHER STRUCTURES.

- Initial dips peripheral to resurrected hills: Bridge, 5.
 Geology of Eminence-Cardareva Quadrangles: Bridge, 6.
 Geology of Potosi-Edgehill Quadrangles: Dake, 15.
 Effect of gravitational compaction: Hedbert, 1.
 Rock pressure: Heroy, 1.
 Review of Bridge's paper: Powers, 2.

Geological Maps of All Parts of Missouri



NOTE: To make this list as complete as possible a few maps have been included that do not appear in the bibliography section. Such maps have no number after the author's name.

STATE MAPS. Listed in chronological order.

- MISSOURI, preliminary map showing the distribution of iron ores in, scale: approx. 11 miles to 1 inch, 1873: Schmidt, 1.
- MISSOURI, geological map of, 1873: Swallow, 1.
- MISSOURI, Swallow's geological map of, 1874: Campbell, R. A., 2.
- MISSOURI, block map showing the area of the coal measures of, scale: 40 miles to 1 inch, 1891: Winslow, 3.
- MISSOURI, geological map of the state of, scale: 18 miles to 1 inch, 1892: Nason, 2.
- MISSOURI, geological map of the state of, scale: 18 miles to 1 inch, 1892: Schweitzer, 3.
- MISSOURI, geological map of, scale: 18 miles to 1 inch, 1894: Keyes, 8.
- MISSOURI, map showing location of coal, lead and zinc mines, marble and granite quarries, tripoli and fire clay mines, scale: 12 miles to 1 inch, 1894: Evans, C., 2.
- MISSOURI, sketch map showing drainage and shape of the upland surface of, 1896: Marbut, 3.
- MISSOURI, sketch map showing physiographic belts and escarpments of, 1896: Marbut, 3.
- MISSOURI, sketch map showing limits of the drift and loess of, scale not given, 1896: Todd, 7.
- MISSOURI, geological map showing the distribution and principal developments of the clay deposits of, scale: 18 miles to 1 inch, 1896: Wheeler, H. A., 7.
- MISSOURI, sketch map showing the location of the clay industries of, scale: 18 miles to 1 inch, 1896: Wheeler, H. A., 7.
- MISSOURI, geologic map of, scale: 18 miles to 1 inch, 1904: Buckley, E. R.
- MISSOURI, geological map showing the location of the principal stone quarries, scale: 18 miles to 1 inch, 1904: Buckley, 5.
- MISSOURI, geological map of, scale: approx. 40 miles to 1 inch, 1904: Williams, 1.
- MISSOURI, sketch map of (shaded to show areas of lead, zinc, and coal lands), scale: 40 miles to 1 inch, 1904: Williams, W., 1.
- MISSOURI, geological map of, scale: 12 miles to 1 inch, 1907: Buehler, 1.
- MISSOURI, anticline in, scale: approx. 40 miles to 1 inch, 1907: Marbut, C. F. in Williams, G. K., 4.
- MISSOURI, geological map of (iron ore localities revised to 1911), scale: 12 miles to 1 inch, 1911: Crane, G. W., 1.
- MISSOURI, geological map of, scale: 12 miles to 1 inch, 1912: Buehler, 5; Hinds, 4.
- MISSOURI, map showing commercial coal fields and mines, scale—36 miles to 1 inch, 1912: Hinds, 4.
- MISSOURI, geological map of, scale: 12 miles to 1 inch, 1913: Hinds, 5.
- MISSOURI, base map showing elevations of, scale: 1:500,000, 1914: Buehler, H. A.
- MISSOURI, geological map of, scale: 1:500,000, 1922: Buehler, 16.
- MISSOURI, clay map of, scale: 20 miles to 1 inch, 1925: Thornberry, 1.
- MISSOURI, geological map of, scale: 1:500,000, 1926: Buehler, 20A.
- MISSOURI, base map of, showing elevations, scale: 1:500,000, 1927: Buehler, H. A.
- MISSOURI, drainage map of, scale: 1:500,000, 1927: Beckman, 1.
- MISSOURI, map showing Hydro-electric developments and lakes, scale: approx. 27 miles to 1 inch, 1934: Buehler, 30.
- MISSOURI, geological map of, scale: 1:500,000, revised, 1939: Buehler, H. A., 34.
- MISSOURI, map showing water power and flood control reservoirs and stream gaging stations, scale—approx. 20 miles to 1 inch, 1940: Beckman, H. C. and Buehler, H. A.

- MISSOURI, index map showing published topographic sheets, 1940: Buehler, H. A.
- MISSOURI, base map of, showing elevations, scale: 1:500,000, revised, 1941: Buehler, H. A.
- MISSOURI, map showing manganese deposits of, scale: approx. 12 miles to 1 inch, 1942: Grawe, 7.
- MISSOURI, magnetic map showing anomalies of vertical intensity, scale: 1:500,000, contour interval - 100 gammas, 1943: Buehler, 38.
- MISSOURI, gravimetric map, scale: 1:500,000, contour interval-50 gravity units, 1943: Buehler, 40.
- MISSOURI, mineral resources map of, scale: approx. 10 miles to 1 inch, 1944: Clark, E. L., 5.
- COUNTY MAPS. Listed in alphabetical order.
- BATES COUNTY, geological map of, scale: 3 miles to 1 inch, 1874: Broadhead, 44.
- BARTON COUNTY, geological map of, scale: 3 miles to 1 inch, 1874: Bradley, 42.
- BENTON COUNTY, mineral map of, scale: 1 mile to 1 inch, 1867: Shumard, 12.
- BENTON COUNTY, geological map of, scale: 3 miles to 1 inch, 1874: Broadhead, 58.
- BOLLINGER COUNTY, map showing iron deposits of, scale: approx. $4\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- BOONE COUNTY, geological map of, scale: 2 miles to 1 inch, 1898: Broadhead, 126.
- BUTLER COUNTY, map showing iron deposits of, scale: approx. $5\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- CALLAWAY AND MONTGOMERY COUNTIES, map of parts of, (outcrop of St. Peter Sandstone), scale: 2 miles to 1 inch, 1918: Dake, 8.
- CAPE GIRARDEAU COUNTY, geological map of, scale: 3 miles to 1 inch, 1873: Shumard, 13.
- CAPE GIRARDEAU COUNTY, map of part of (outcrop of St. Peter and Everton Sandstones), scale: 2 miles to 1 inch, 1918: Dake, 8.
- CARTER COUNTY, map showing iron deposits of, scale: approx. $3\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- CASS COUNTY, structure map of, scale: approx. 1 mile to 1 inch, 1943: Clair, 3.
- CASS AND JACKSON COUNTIES, map showing thickness of Kinderhook shale—St. Peter Sandstone interval and approximate line of St. Peter overlap, scale: 8 miles to 1 inch, 1943: Clair, 3.
- CEDAR COUNTY, geological map of, scale: 3 miles to 1 inch 1874: Broadhead, 40.
- CLARK COUNTY, geological map of, scale: 3 miles to 1 inch, 1873: Shumard, 13.
- CLAY COUNTY, structure map of north of Kansas City, scale: $\frac{1}{2}$ mile to 1 inch, 1922: Wilson, M. S., 2.
- COOPER COUNTY, geological map of, scale: 3 miles to 1 inch, 1855: Swallow, 1.
- CRAWFORD COUNTY, map showing iron deposits of, scale: approx. 4 miles to 1 inch, 1912: Crane, G. W., 1.
- CRAWFORD COUNTY, magnetic map showing anomalies of vertical intensity in the earth's field in, scale: 2 miles to 1 inch, 1932: Grohskopf, 1.
- DENT COUNTY, map showing iron deposits of, scale: approx. $4\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- FRANKLIN COUNTY, map showing iron deposits of, scale: approx. $5\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- FRANKLIN COUNTY, geological map of, scale: 3 miles to 1 inch, 1855: Swallow, 1.
- HICKORY COUNTY, mineral map of, scale: 1 mile to 1 inch, 1867: Shumard, 12.
- HOWARD COUNTY, geological map of, scale: 3 miles to 1 inch, 1874: Broadhead, 45.
- HOWELL COUNTY, map showing iron deposits of, scale: approx. $4\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- JACKSON COUNTY, geological map of, scale: 1 mile to 1 inch, 1917: McCourt, 1.
- JACKSON COUNTY, map showing location of wells, 1943: Clair, 3.
- JACKSON COUNTY, structure map of, scale: approx. 1 mile to 1 inch, 1943: Clair, 3.
- JACKSON AND CASS COUNTIES, map showing total dissolved solids in waters from the lower Cherokee Horizons, scale: approx. 12 miles to 1 inch, 1943: Clair, 3.
- JACKSON AND CASS COUNTIES, map showing wells completed in the Mississippian or deeper formations, scale—approx. $4\frac{1}{2}$ miles to 1 inch, 1943: Clair, 3.
- JASPER COUNTY, geological map of, scale: 4 miles to 1 inch, 1874: Broadhead, 41.

- JEFFERSON COUNTY, geological map of, scale: 3 miles to 1 inch, 1873: Shumard, 13.
- JEFFERSON, FRANKLIN AND ST. LOUIS COUNTIES, map of parts of, (outcrop of St. Peter and Everton Sandstones), scale: 2 miles to 1 inch, 1918: Dake, 8.
- LAFAYETTE COUNTY, sketch map showing the approximate coal area included within the limits of the Mulky and Lexington beds, scale—8 miles to 1 inch, 1890: Winslow, 2.
- LAWRENCE COUNTY geological map, scale: 1:62,500, 1929: Ruffledge, R.
- LINCOLN COUNTY, geological map of, scale: 1 mile to 1 inch, 1873: Potter, W. B., 1.
- LINCOLN COUNTY, geological map of coal region, scale: 1 mile to $4\frac{1}{2}$ inches, 1873: Potter, W. B., 1.
- LINCOLN COUNTY, map of part of, (outcrop of St. Peter Sandstone), scale: 2 miles to 1 inch, 1918: Dake, 8.
- MADISON COUNTY, geological map of, scale: 3 miles to 1 inch, 1874: Broadhead, 52.
- MARION COUNTY, geological map of, scale: 3 miles to 1 inch, 1855: Swallow, 1.
- MARION, RALLS, PIKE AND LINCOLN COUNTIES, map showing Devonian outcrops in, scale: approx. $\frac{3}{4}$ mile to 1 inch, 1923: Branson, 12.
- MILLER COUNTY, geological map of, scale: 3 miles to 1 inch, 1873: Meek, 6.
- MILLER COUNTY, geological map of, scale: 1:93,750, 1903: Ball, S. H., 1.
- MONITEAU COUNTY, geological map of, scale: 3 miles to 1 inch, 1855: Swallow, 1.
- MONITEAU COUNTY, geological map of, scale: $1\frac{1}{2}$ miles to 1 inch, 1905: Van Horn, 1.
- MORGAN COUNTY, geological map of, scale: 4 miles to 1 inch, 1873: Meek, 7.
- MORGAN COUNTY, geological map of, scale: $1\frac{1}{2}$ miles to 1 inch, 1908: Marbut, 15.
- OREGON COUNTY, map showing iron deposits of, scale: approx. 6 miles to 1 inch, 1912: Crane, G. W., 1.
- OZARK COUNTY, geological map of, scale: 6 miles to 1 inch, 1873: Shumard, 13.
- PERRY AND BOLLINGER COUNTIES, map of parts of, (outcrops of St. Peter and Everton Sandstones), scale: 2 miles to 1 inch, 1918: Dake, 8.
- PETTIS AND COOPER COUNTIES, map showing Devonian outcrops in, scale approx. $3\frac{1}{4}$ miles to 1 inch, 1923: Branson, 12.
- PHELPS COUNTY, map showing iron deposits of, scale: approx. 5 miles to 1 inch, 1912: Crane, G. W., 1.
- PIKE COUNTY, geological map of, scale: $1\frac{1}{2}$ miles to 1 inch, 1908: Rowley, 24.
- PULASKI COUNTY, geological map of, scale: 3 miles to 1 inch 1873: Shumard, 13.
- REYNOLDS COUNTY, map showing iron deposits of, scale: approx. $5\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- RIPLEY COUNTY, map showing iron deposits of, scale: approx. 5 miles to 1 inch, 1912: Crane, G. W., 1.
- STE. GENEVIEVE COUNTY, geological map of, scale: 3 miles to 1 inch, 1873: Shumard, 13.
- STE GENEVIEVE COUNTY, map of part of, (outcrop of St. Peter and Everton Sandstones), scale: 2 miles to 1 inch, 1918: Dake, 8.
- STE. GENEVIEVE COUNTY, and parts of Perry and St. Francois Counties, geological and topographic map of, scale: 1:62,500, 1922: Weller, S., 27.
- ST. LOUIS COUNTY, geological map of, scale: 3 miles to 1 inch, 1855: Swallow, 1.
- ST. LOUIS COUNTY, reference map showing the location of the quarries, clay pits and works, and the distribution of the geological formations, scale: 3 miles to 1 inch, 1890: Ladd, 2.
- ST. LOUIS COUNTY, geologic and water province map of, scale: 5 miles to 1 inch, 1934: Gleason, 2.
- SHANNON COUNTY, map showing iron deposits of, scale: approx. 6 miles to 1 inch, 1912: Crane, G. W., 1.
- STODDARD COUNTY, geologic map, scale: 2 miles to 1 inch, 1936: Farrar, 3.
- STODDARD COUNTY, structure map of, scale: 4 miles to 1 inch, 1936: Farrar, 3.
- VERNON COUNTY, geological map of, scale: 3 miles to 1 inch, 1874: Broadhead, 43.
- VERNON COUNTY, geological map of, scale: 2 miles to 1 inch, 1926: Greene, F. C., 3.
- WARREN and ST. CHARLES COUNTIES, maps of parts of, (outcrops of St. Peter Sandstone), scale: 2 miles to 1 inch, 1918: Dake, 8.
- WASHINGTON and ST. FRANCOIS COUNTIES, geological map of the barite deposits of, scale: 1 mile to 1 inch, 1918: Tarr, 7.
- WAYNE COUNTY, map showing iron deposits of, scale: approx. $3\frac{1}{2}$ miles to 1 inch, 1912: Crane, G. W., 1.
- WRIGHT COUNTY, geological map of, scale: 3 miles to 1 inch, 1873: Shumard, 13.

QUADRANGLES: Listed in alphabetical order.

- Bevier Sheet, geologic and topographic map, scale: 1:62,500, 1891: Gordon, 3.
- Bevier Sheet, geologic and topographic map, scale: 1:62,500, 1910: Hinds, 4.
- Bonne Terre Sheet, geologic and topographic map, scale: 1:62,500, 1908: Buckley, 22.
- Calhoun Sheet, geologic and topographic map, scale: 1:62,500, 1898: Marbut, 4.
- Calhoun Sheet, geologic and topographic map, scale: 1:62,500, 1911: Hinds, 4; Marbut, 4.
- Clinton Sheet, geologic and topographic map, scale: 1:62,500, 1898: Marbut, 5.
- Clinton Sheet, geologic and topographic map, scale: 1:62,500, 1911: Marbut, 5; Hinds, 4.
- Eminence-Cardareva Quadrangle, geologic and topographic map of, scale: 1:62,500, 1930: Bridge, 6.
- Eminence-Cardareva Quadrangle, structure contour map of (contoured on top of the Gunter sandstone), scale: 2 miles to 1 inch, 1930: Bridge, 6.
- Flat River, lead areas, geological map of, scale: $5\frac{1}{2}$ inches to 1 mile, 1908: Buckley, 22.
- Higginsville Sheet, geological and topographic map, scale: 1:62,500, 1892: Winslow, 6.
- Higginsville Sheet, geological and topographic map, scale: 1:62,500, 1896: Winslow, 5.
- Huntsville Sheet, geological and topographic map, scale: 1:62,500, 1898: Marbut, 6.
- Huntsville Sheet, geological and topographic map, scale: 1:62,500, 1910: Hinds, 4.
- Iron Mountain Sheet, geologic and topographic map, scale: 1:62,500, 1890: Winslow, 15.
- Leavenworth Quadrangle (Missouri-Kansas), geologic and topographic map of, scale: 1:62,500, 1915: Hinds, 6.
- Lexington Sheet, geologic and topographic map, scale: 1:62,500, 1898: Marbut, 7.
- Lexington Sheet, geologic and topographic map, scale: 1:62,500, 1910: Marbut, 7; Hinds, 4.
- Mine LaMotte Sheet, geologic and topographic map, scale: 1:62,500, 1896: Keyes, 18.
- Potosi-Edgehill Quadrangles, geologic and topographic map of, scale: 1:62,500, 1929: Dake, C. L., 15.
- Richmond Sheet, geologic and topographic map, scale: 1:62,500, 1898: Marbut, 8.

Richmond Sheet, geologic and topographic map, scale: 1:62,500, 1910: Marbut, 8; Hinds, 4.

Rolla Quadrangle, geologic and topographic map of, scale: 1:62,500, 1913: Lee, 2.

Smithville Quadrangle, geologic and topographic map of, scale: 1:62,500, 1915: Hinds, 6.

MISCELLANEOUS MAPS. Listed in chronological order.

- Iron Mountain Railroad, geological map showing mineral region contiguous to, scale: 3 miles to 1 inch, 1859: Phillips, J., 1.
- Southeast branch, Pacific Railroad, geological map of, scale: 12 miles to 1 inch, 1859: Swallow, 5.
- Northern Missouri, preliminary geological map of, scale: approx. 10 miles to 1 inch, 1875: Broadhead, 19; Pumpelly, 1.
- Northern Missouri, geological map of part of, scale: 4 miles to 1 inch, 1874: Broadhead, 33.
- Central Missouri, map of lead region of, scale: 6 miles to 1 inch, 1874: Schmidt, 3.
- St. Louis, sketch map showing the location of the quarries, clay works and clay pits in the city of, scale: $1\frac{1}{2}$ miles to 1 inch, 1890: Ladd, 2.
- Southwestern Missouri, map of lead and zinc district of, scale: 10 miles to 1 inch, 1894: Winslow, 14.
- Central Missouri, map of lead and zinc districts of, scale: 10 miles to 1 inch, 1894: Winslow, 14.
- Southeastern Missouri, map of lead and zinc district of, scale: 10 miles to 1 inch, 1894: Winslow, 14.
- Southeastern Missouri, map showing distribution of crystalline rocks in, scale: approx. 6 miles to 1 inch, 1895: Hawthorth, 10.
- Southeastern Missouri, geological map of the disseminated lead ore sub-district of, scale: 3 miles to 1 inch, 1895: Winslow, 20.
- Southeast Missouri, map showing the distribution of quarries in the granite district of, scale: 6 miles to 1 inch, 1904: Buckley, 5.
- Granby area, Newton County, topographic and geologic map of the, scale: $\frac{3}{4}$ mile to 1 inch, 1905: Buckley, 11.
- Granby area, map showing the relation of ore "runs" to topography in, scale: 300 feet to 1 inch, 1905: Buckley, 11.
- Joplin District, geologic and topographic map of, scale: 1:62,500, 1907: Smith, W. S. T., 2A.

- Joplin District, geologic, topographic, structural, and economic geology, map of, scale: 1:62,500, 1907: Smith, W. S. T., 2A.
- Southeastern Missouri, geological map of, scale: 4 miles to 1 inch, 1908: Buckley, 22.
- Bonnetterre area, geological and topographic map of, scale: $\frac{3}{8}$ mile to 1 inch, 1908: Buckley, 22.
- Flat River-Leadwood areas, geological and topographic map of, scale, $\frac{2}{5}$ mile to 1 inch, 1908: Buckley, 11.
- Southwest limonite district, map showing limonite deposits of, scale: approx. 4 miles to 1 inch, 1912: Crane, G. W., 1.
- Kansas City, Missouri, geological map of, scale: $\frac{3}{4}$ mile to 1 inch, 1917: McCourt, 1.
- Base of Pennsylvanian, map showing altitude of, 1922: Wilson, M. E., 2.
- Belton area, structure map of the, scale: $\frac{1}{2}$ mile to 1 inch, 1918: Wilson, M. E., 1.
- Part of Missouri, map showing location of cannel coal deposits of, scale: 1:1,000,000, 1918: Ashley, 1.
- Belton area, structure map of the, scale: $\frac{1}{2}$ mile to 1 inch, 1922: Wilson, M. E., 2.
- Bevier coal, map showing structure of, 1922: Wilson, M. E., 2.
- Breckenridge area, Caldwell County, structure map of the, scale: $\frac{1}{2}$ mile to 1 inch, 1922: Wilson, M. E., 2.
- Northwest portion of Vernon County, structure map of, scale: $\frac{1}{2}$ mile to 1 inch, 1922: Wilson, M. E., 2; Greene, F. C., 3.
- Portion of Clay County north of North Kansas City, structure map of, scale: $\frac{1}{2}$ mile to 1 inch, 1922: Wilson, M. E., 2.
- Princeton area, Mercer County, structure map of, scale: approx. $\frac{5}{8}$ mile to 1 inch, 1922: Wilson, M. E., 2.
- West Boone township, Bates County, structure map of, scale: approx. $\frac{5}{8}$ mile to 1 inch, 1922: Wilson, M. E., 2.
- Missouri River, map showing Devonian formations along, scale: 2 miles to 1 inch, 1923: Branson, 12.
- Mississippi River, structure map of area adjoining river showing contours on the base of the Burlington limestone, scale: 5 miles to 1 inch, 1924: Krey, 1.
- Northwest Vernon County, map showing drilled oil and gas wells in, scale: approx. $\frac{5}{8}$ mile to 1 inch, 1926: Greene, F. C., 3.
- Palmer Lead District, map of the, scale: approx. $\frac{3}{4}$ mile to 1 inch, 1930: Dake, 15.
- Barite producing area about Potosi, map of, scale: 1 mile to 1 inch, 1930: Dake, 15.
- Joplin zinc-lead District, magnetometer map of, scale: 4 miles to 1 inch, 1931: Grohskopf, 1.
- Silver Hollow Mine, magnetic survey of, scale: approx. 110 feet to 1 inch, 1933: Grohskopf, 1.
- Western Missouri, map showing oil and gas pools of, scale: approx. 8 miles to 1 inch, 1938: Greene, 4.
- Ackermann gas pool, Bates County, geological structure map of, scale: $\frac{1}{4}$ mile to 1 inch, 1933: Greene, 4.
- Long gas pool, Bates County, geological structure map of, scale: approx. $\frac{3}{8}$ mile to 1 inch, 1933: Greene, 4.
- Freeman and Peculiar, Cass County, geological structure map of gas pools between, scale: approx. $\frac{1}{4}$ mile to 1 inch, 1933: Greene, 4.
- Freeman, Cass County, geological structure map of gas pools near, scale: approx. $\frac{3}{8}$ mile to 1 inch, 1933: Greene, 4.
- Knorr pool, Cass and Jackson Counties, geological structure map of, scale: $\frac{1}{2}$ mile to 1 inch, 1933: Greene, 4.
- Shawhan and Lone Jack gas pools, Jackson County, geological structure map of, scale: approx. $\frac{1}{2}$ mile to 1 inch, 1933: Greene, 4.
- Independence gas pool, Jackson County, geological structure map of, scale: $\frac{1}{4}$ mile to 1 inch, 1933: Greene, 4.
- Avondale gas pool, Clay County, geological structure map of, scale: approx. $\frac{1}{4}$ mile to 1 inch, 1933: Greene, 4.
- Liberty gas pool Clay County, geological structure map of, scale: 1 mile to 1 inch, 1933: Greene, 4.
- Paradise gas pool, Clay County, geological structure map of, scale: $\frac{1}{2}$ mile to 1 inch, 1933: Greene, 4.
- Lathrop gas pool, Clinton County, geological structure map of, scale: $\frac{1}{2}$ mile to 1 inch, 1933: Greene, 4.
- Blue Springs gas field, Jackson County, geological structure map of, contours on top of Bethany Falls limestone, scale: approx. $\frac{3}{4}$ mile to 1 inch, Bartle, 1.
- Blue Springs gas field, Jackson County, geological structure map of, contours on top of Squirrel sand, scale: approx. $\frac{3}{4}$ mile to 1 inch, 1933: Bartle, 1.
- Silver Mine area, geologic map of, scale: 1000 feet to 1 inch, 1933: Tolman, 3.
- Southeast Missouri, reconnaissance geologic map of a portion of, scale: 4 miles to 1 inch, 1934: Farrar, 2.

- Savannah area, Andrew County, map showing anomalies of vertical magnetic intensity, scale: 2 miles to 1 inch, 1934: Greene, F. C., 5.
- Savannah district, Andrew County, geological structure map of, scale: approx. $\frac{1}{2}$ mile to 1 inch, 1934: Greene, F. C., 5.
- Northwest Missouri, preliminary map showing pre-glacial topography of, scale: 20 miles to 1 inch, 1934: Greene, F. C., 7.
- Fillmore area, Andrew County, structure contour map of, scale: approx. $\frac{5}{8}$ mile to 1 inch, 1936: Greene, F. C., 9.
- Gower area, Clinton and Buchanan Counties, structure contour map of, scale: approx. 1 mile to 1 inch, 1936: Greene, F. C., 9.
- Southeast Missouri, map showing thickness of Dutchtown formation, scale: 4 miles to 1 inch, 1936: McQueen, 10.
- Central Missouri, map showing areas in which suitable rock wool occurs, scale: 2 miles to 1 inch, 1936: McQueen, 11.
- Lawrence County, map showing location of area of Halloysite, scale: $1\frac{1}{4}$ miles to 1 inch, 1936: Smith, A. F., 1.
- Northwestern Missouri, magnetic map showing anomalies of vertical intensity. Also shows location of important wells in Northwestern Missouri, scale: 4 miles to 1 inch, contour interval-50 gammas, 1938: McQueen, 12.
- North Central and northeastern Missouri, map showing location of important wells of record, scale: 4 miles to 1 inch, 1938: Grohskopf, 3.
- Northwest Missouri, isopach map, showing interval between base of Hertha limestone and top of Mississippian limestone, scale: 8 miles to 1 inch, 1938: McQueen, 12.
- Northeast Missouri, generalized structure map of (Datum is base of Burlington formation.), scale: approx. 20 miles to 1 inch, 1938: Grohskopf, 3.
- Northwestern Missouri, base map showing location of important wells of record, scale: 4 miles to 1 inch, 1938: McQueen, 12.
- Northwestern Missouri, preliminary map of Pennsylvanian outcrop and pre-glacial topography, scale: approx. 8 miles to 1 inch, 1938: McQueen, 12.
- Northwestern Missouri, map showing structure of base of Kansas City group (Base, Hertha Limestone), scale: approx. 4 miles to 1 inch, 1938: McQueen, 12.
- Forest City-Oregon area, Holt County, structure contour map of, scale: 2 miles to 1 inch, 1938: McQueen, 12.
- Avondale gas pool, Clay County, structure contour map of, scale: approx. $\frac{1}{4}$ mile to 1 inch, 1938: McQueen, 12.
- Camden Point area, Platte County, structure contour map of scale: 2 miles to 1 inch, 1938: McQueen, 12.
- Cameron area, Clinton and DeKalb Counties, structure contour map of, scale: approx. 2 miles to 1 inch, 1938: McQueen, 12.
- Fillmore-Savannah area, Andrew County, structure contour map of the, scale: approx. $\frac{1}{4}$ mile to 1 inch, 1938: McQueen, 12.
- Gower area, Clinton and Buchanan Counties, structure contour map of, scale: approx. 5 miles to 1 inch, 1938: McQueen, 12.
- Hammond, Clinton County, (North Plattsburg) and South Plattsburg gas pools, structure contour map of, scale: approx. 2 miles to 1 inch, 1938: McQueen, 12.
- Lathrop gas pool, Clinton County, structure contour map of, scale: approx. $\frac{5}{8}$ miles to 1 inch, 1938: McQueen, 12.
- Paradise and Ellington gas pools, Clay County, structure contour map of, scale: approx. $1\frac{1}{4}$ miles to 1 inch, 1938: McQueen, 12.
- Southeastern Missouri Embayment Area, magnetic map showing anomalies of vertical intensity, scale: 4 miles to 1 inch, contour interval-50 gammas, 1938: Buehler, 35A.
- Southeastern Missouri Embayment Area, base map showing location of important wells of record, scale: 4 miles to 1 inch, 1940: McQueen, H. S.
- Ardeola, Stoddard County, geologic and topographic map showing location of bauxitic clay occurrence, scale: approx. 200 feet to 1 inch, 1942: Stewart, D. R., 1.
- Joplin District, geological maps showing mining and mineralized areas (set of six maps, each map covering one township), scale: 1:15,840, 1942: Buehler, 37.
- Northwestern Missouri, map showing areas producing Lexington coal, 1942: Greene, F. C., 11.
- Polo Gas Field, Caldwell County, map showing structure of top of Polo Gas Sand, scale: approx. $\frac{1}{2}$ mile to 1 inch, 1942: Greene, F. C., 10.
- Polo Gas Field, Caldwell County, map showing structure of Base of Kansas City Group (Base, Hertha Limestone), scale: approx. $\frac{1}{2}$ mile to 1 inch, 1942: Greene, F. C., 10.
- Polo Gas Field, Caldwell County, map showing thickness of Polo Gas Sand, scale: approx. $\frac{1}{2}$ mile to 1 inch, 1942: Greene, F. C., 10.

Western Missouri, map showing location of oil and gas pools in, scale: approx. 12 miles to 1 inch, 1942: Greene, F. C., 10.

Fredericktown Area, reconnaissance geologic map of, scale: approx. $\frac{3}{4}$ mile to 1 inch, 1943: McQueen, 15.

Belton area, Cass County, Missouri, structure map, scale: approx. $\frac{1}{2}$ mile to 1 inch, 1943: Clair, 3.

Jackson County, Blue Ridge Gas Field, structure map of, scale: $\frac{1}{2}$ mile to 1 inch, 1943: Clair, 3.

East Central Missouri, fire clay districts, map of, scale: 4 miles to 1 inch, 1943: McQueen, 16.

Gasconade County—Kruegers Ford Anticline, reconnaissance structure and geological map of, scale: approx. $1\frac{1}{4}$ mile to 1 inch, 1943: McQueen, 16.

Lincoln County, geologic map of Whiteside clay locality, scale: approx. $\frac{3}{4}$ mile to 1 inch, 1943: McQueen, 16.

Mexico and vicinity, Audrain County, generalized structure contour map of, scale: approx. 1 mile to 1 inch, 1943: McQueen, 16.

Monroe County, Goss locality, geologic and structure contour map of, scale: approx. 2000 feet to 1 inch, 1943: McQueen, 16.

Ralls County, area in vicinity of Perry, reconnaissance geologic map of, scale: 2 miles to 1 inch, 1943: McQueen, 16.

Miscellaneous Subjects



BIOGRAPHY and OBITUARY.

- A. A. Blair: Broadhead, 133.
 Garland Carr Broadhead with bibliography: Greger, 11; Keyes, 78.
 Ernest Robertson Buckley: Buehler, 6.
 Henry Andrew Buehler: Allen, R. C., 1; Clark, E. L., 4; Hotchkiss, 1; Wheeler, 13.
 Guy Henry Cox: Dake, 12.
 Charles Lawrence Dake: Bridge, 7.
 Edwin Harrison: Broadhead, 140.
 Major Frederick Hawn: Broadhead, 128.
 Abraham Litton, M. D.: Broadhead, 134.
 Joseph Nicolas Nicolle: Keyes, 91.
 Charles Joseph Norwood: Keyes, 92.
 Joseph Granville Norwood: Broadhead, 124; Keyes, 129.
 Hiram Augustus Prout: Greger, 26.
 Raphael Pumpelly: Keyes, 88.
 Robert Roswell Rowley: Williams, J. S., 8.
 Edward Martin Shepard: Buehler, 28, 29.
 Benjamin Franklin Shumard, M. D.: Greger, 25; Keyes, 117.
 George Clinton Swallow: Broadhead, 129, 143; Keyes, 94.

BIBLIOGRAPHIES, PUBLICATION LISTS, ETC.

- Bibliography of geology of Missouri 1890: Sampson, 3.
 Bibliography of Missouri geology 1896: Keyes, 28.
 Publications of Missouri Geological Survey: Greger, 1-3.
 Catalogue and index of contributions to North American geology, 1732-1891: Darton, 1.
 Bibliography of North American geology, 1892-1900: Weeks, 1.
 Bibliography of North American geology, 1901-1905: Weeks, 3.
 Bibliography of North American geology, 1906-1907: Weeks, 4.
 Bibliographies of geologic literature of North America, 1785-1918, 1919-1929: Nickles, 2, 3.
 Bibliography of North American geology, 1929-39, 1940-41: Thom, E. M., 1, 2.
 North American geologic formation names: Weeks, 2.
 Index to the stratigraphy of North America: Willis, 1.
 Lexicon of geologic names of the United States: Wilmarth, 1.

- Bibliography of North American paleontology: Keyes, 7.
 Bibliography of paleozoic crustacea, 1698-1889: Vodges, 4.
 Bibliographic index of North American Eublastus: Greger, 23.
 Bibliography of lead and zinc: Robertson, J. D., 1.
 Bibliography of writings of G. C. Broadhead: Greger, 11.
 Geology of Missouri. Branson, 52.

CATALOGUES.

- Catalogue of Missouri fossils: Ham-bach, 3.
 Catalogue of meteorites in Field Columbian Museum: Farrington, 1.
 Catalogue of meteorites in Harvard collection: Huntington, 1.

FIELD CONFERENCES.

- Missouri-Iowa field conference 1928: Folger, 1.
 Field conferences: Kansas Geological Society, 1-6.

GEOGRAPHY, GENERAL.

- Some geographic influences in the development of type railroads in Missouri: Bratton, 1.
 Geography of the Ashland region: Fahrmer, 1.
 Geography of Galena-Joplin lead and zinc: Haworth, 16.
 Zinc mines at close of 1900: Hedburg, 1.
 Geography of flood-plain of lower Mississippi River: Knapp, 1.
 Geography of Boone County: Knight, M., 1.
 Geography of the Hermann region: Langendoerfer, 1.
 Geographic development of Crowley's Ridge: Marbut, 1.
 Water and northeast Missouri: Mason, C. Y., 1.
 Geography of Ozark Highland: Sauer, 1.
 Development of transportation in the Ozarks: Schultz, G., 1.
 The Florissant basin: Straube, 1.
 Geological report of the southwest branch of the Pacific Railroad: Swallow, 5, 15.

- Geographic study of Greene Co.: Thomas, 1.
- Geography of the Grays Summit Saddle: Walka, 1.
- Geographic development of eastern part of Mississippi drainage: Westgate, 1.
- Geography of Rockwoods reserve: Wraight, 1.
- GEOGRAPHY, URBAN.**
- Geography of the North Kansas City region: Adams, J. Q., 1.
- Urbanization of River des Peres, (St. Louis): Crosby, 1.
- Geography of trade territory of St. Louis-San Francisco railway: Forrester, 1.
- Geographic factors of population distribution in suburban St. Louis: Gilmore, 1.
- Geographic factors in settlement of Hermann, Missouri: Hartnagel, 1.
- Geography of early part of St. Louis: Marshall, 1.
- Geography of nuclei of St. Louis: Miller, A. C., 1.
- Analysis of an urban landscape: Thomas, 2.
- Northwest industrial district of St. Louis: Wood, 1.
- GEOLOGY, GENERAL.**
- Geology of Missouri: Branson, 8, 52; Broadhead, 35, 67, 86, 110; Gallaher, J. A., 4; Keyes, 151; Peery, 1; Swallow, 16, 19, 20; Winslow, 17.
- Geology of Ozark region: Adams, G. I., 1.
- Geological railway guides: Broadhead, 88.
- Geological formation of Missouri: Broadhead, 115.
- Geology and mineral deposits of the Ozark region: Buehler, 9, 12.
- Geology of western states: Hall, 1.
- Geology of the United States: Rodgers, 1.
- Missouri-Illinois formations are studied by geologists: Simmons, 1.
- Explanation of the geological map of Missouri: Swallow, 6, 17.
- GUIDEBOOK, GEOLOGICAL.** Refer also to **FIELD CONFERENCES.**
- Baltimore and Ohio railroad, Int. Geol. Congress 1933: Grimsley, 1.
- HISTORICAL PAPERS.**
- The following papers, arranged chronologically, describe geological features of Missouri as recorded by contemporaneous writers from 1804 through 1865 with a few subsequent papers of a general character.
- 1804 Lead mines of upper Louisiana: Austin, 1; Stoddard, 1.
- 1804-06 Lewis and Clark expedition: Clark, M., 1.
- 1805 Lead mines and salines in Missouri: McNair, 1.
- 1805-07 Exploration of western territories: Pike, Z. M., 1, 2.
- 1809-11 Interior of America: Bradbury, 1.
- 1814 Views of Louisiana: Brackenridge, 1.
- 1814 Lead ores of Ste. Genevieve: Meade, 1.
- 1818 Geology of the United States: Maclure, 1.
- 1819 Expedition from Pittsburg to the Rocky Mountains: Long, S. H., 1.
- 1819 Travels into Arkansas territory: Nuttall, 1.
- 1819 Description of lead mines: Schoolcraft, 1, 3.
- 1821 Geologic structure of Mississippi valley: Nuttall, 2.
- 1821 Geology, etc., of region around the Mississippi and its confluent waters: Bringier, 1.
- 1821-53 Other explorations in Missouri territory: Schoolcraft, 2, 4-6.
- 1822 Lead mines in 1822: Bomford, 1.
- 1825 Catalogue of American minerals: Robinson, 1.
- 1827 Calamine and lead mines in Missouri: Troost, 1.
- 1834-47 Geological reconnaissance of area west of the Mississippi, etc.: Featherstonhaugh, 1-4.
- 1840 Geological exploration of Iowa: Owen, D. D., 1.
- 1840 Mineral deposits of Missouri: Shepard, C. U., 1.
- 1840-52 Geological reconnaissance of Missouri: King, 1-3, 5, 6.
- 1841-43 Upper Mississippi Basin: Nicolet, 1-3.
- 1843-52 Geology of Iowa etc.: Owen, D. D., 3-5.
- 1846 Bent's fort to St. Louis: Abert, 1.
- 1846 The Northwest ... and Missouri: Bradford, 1.
- 1846 Tour of Mexico starting at St. Louis: Wislizenus, 1.
- 1847 Lead mines of southwest Missouri: Mosley, 1.
- 1848 Letter on geology: Christy, 1.
- 1848 Geology of Missouri: Prout, 1-3.
- 1848 Statistics of coal: Taylor, R. C., 1.
- 1848-1858 (?) Clays and minerals of Missouri: Woolford, 1-3.
- 1849 Second visit to the United States: Lyell, 1.
- 1850 Geological surveys: Prout, 2.
- 1850 Journey, St. Louis to Fulton: Barney, 1.
- 1850-66 Description of fossils: Shumard, 1-9, 11.

- 1851 Crinoids in western states: Yandell, 1.
 1852 Journey, St. Louis to Red River: Barney, 2.
 1852 Coal fields on western waters: Jamison, 1.
 1852 Geological report on Wisconsin: Norwood, J. G., 2.
 1852 Iron Mountain and Pilot Knob: Shepard, C. U., 3.
 1853 Stansberry Howard survey of Utah: Hall, 3.
 1853 Paper before Missouri Historical Society: Maughas, 1.
 1853 Artesian well in St. Louis: Prout, 5.
 1855 Country between Missouri and Mississippi Rivers: Hawn, 1.
 1855 Mines in southeast Missouri: Litton, 1.
 1855 Geologic map of the United States: Marcou, 1.
 1855 Resources of Missouri: Maughas, 2.
 1855 Metallic wealth of the United States compared with that of other countries: Whitney, 2.
 1857 Mexican boundary survey: Hall, 4.
 1857 Southwestern branch of Pacific railway: Swallow, 5.
 1857-60 Fossil descriptions: Prout, 6-10.
 1858 Geological reconnaissance of Arkansas: Owen, D. D., 7.
 1858 Geology of the United States: Rodgers, 1.
 1858 Geological map of Missouri: Swallow, 6.
 1859 Fossils from western states: McChesney, 1.
 1859 Mineral district near Iron Mountain Railroad: Phillips, J. V., 2.
 1861 American geology: Hunt, 3.
 1862 Devonian studies: White, C. A., 1, 2.
 1864 Geological reconnaissance of Nebraska: Marcou, 2.
 1865 Missouri handbook: Parker, N. H., 1.
 1874 Gazetteer of Missouri: Campbell, R. A., 1, 2.
 1874 History of lead mining in Missouri: Cobb, 2.
 1874 Pilot Knob, Iron Mountain, Mine LaMotte: Frazer, 1.
 1874 Iron works outside St. Louis: Anon., 3.
 1875 Another Missouri copper mine (Ste. Genevieve Co.): Anon., 4.
 1875 Granite quarries: Anon., 5.
 1883 Year Book on manufacture in St. Louis: Howe, 1.

HISTORY OF MINING AND OF GEOLOGICAL INVESTIGATIONS.

- Early mining in Missouri: Broadhead, 34.
 Old maps: Broadhead, 102.
 Explorers of western America: Broadhead, 103.
 Our western empire: Brocket, 1.
 History of Galena-Joplin lead and zinc: Haworth, 16.
 First mention of zinc ore in America: Keyes, 79.
 Early geological exploration of Joseph Nicollet: Keyes, 91.
 History of southeast Missouri lead district (1909): Ruhl, 6.
 Historical sketch of investigation of the lower Silurian in the Mississippi Valley: Ulrich, 12.
 History for southeast Missouri: Wilson, L. A., 1.

REPORTS OF STATE GEOLOGIST.

- First annual report, 1853: Swallow, 1.
 Second annual report, 1854: Swallow, 2.
 Third report of progress, 1855-56: Swallow, 4.
 Fourth report of progress, 1857-58: Swallow, 9.
 Fifth report of progress, 1859-60: Swallow, 10.
 Review of reports, 1855-1871: Broadhead, 55.
 Annual report, 1871: Hager, 1.
 Report of progress, 1871-1872: Norwood, J. G., 6.
 Field work of 1873-74: Broadhead, 33.
 Administrative report, 1889-90: Winslow, 1.
 Biennial report, 1891-92: Winslow, 9.
 Missouri official geological reports, 1893: Sampson, 4.
 Biennial report, 1893-94: Keyes, 10.
 Biennial report, 1895-96: Keyes, 32.
 Biennial report, 1896-97: Gallaher, J. A., 1.
 New Year announcement of Bureau of Geology and Mines of Missouri: Gallaher, J. A., 1.
 Biennial report, 1899-1900: Gallaher, L., 1.
 Biennial report, 1901-02: Buckley, 1.
 Biennial report, 1903-04: Buckley, 8.
 Biennial report, 1905-06: Buckley, 12.
 Biennial report, 1907-08: Buehler, 2.
 Biennial report, 1909-10: Buehler, 4.
 Biennial report, 1911-12: Buehler, 7.
 Biennial report, 1913-14: Buehler, 8.
 Biennial report, 1915-16: Buehler, 10.
 Biennial report, 1917-18: Buehler, 14.
 Biennial report, 1919-20: Buehler, 15.
 Biennial report, 1921-22: Buehler, 17.
 Biennial report, 1923-24: Buehler, 20.
 Biennial report, 1925-26: Buehler, 22.
 Biennial report, 1927-28: Buehler, 23.
 Biennial report, 1929-30: Buehler, 24.

Biennial report, 1931-32: Buehler, 27.
Biennial report, 1933-34: Buehler, 30.
Biennial report, 1935-36: Buehler, 31.
Biennial report, 1937-38: Buehler, 32.
Biennial report, 1939-40: Buehler, 35.
Biennial report, 1941-42: Buehler, 36.
Biennial report, 1943-44: Clark, 6.

SCHOOL OF MINES.

Advocating a School of Mines: King, 4.
Transfer of Geological Survey to School
of Mines: Williams, 6.

STATE GEOLOGICAL SURVEYS.

Missouri geological surveys: Broadhead,
111, 130.
System of keeping records of a Geo-
logical Survey: Buckley, 6.
Missouri Bureau of Geology and Mines:
Buehler, 19.

Recent activities of Missouri Bureau of
Geology and Mines: Buehler, 21.
Geology surveys of ... Missouri: Case,
T. S., 2.

Missouri resources shown at World's
Fair, Chicago, 1893: Francis, 1.

Geological survey of Iowa: Hall, 7.

Organization and results of a State
Geological Survey: Keyes, 11.

Advantages of a geological survey to
the state: Prout, 4.

Geological survey of Missouri: Trow-
bridge, 2.

Transfer of Geological Survey to School
of Mines, 1876: Williams, C. P., 6.

Geological surveys, their relationship to
successful mining: Winslow, 4.

Geological surveys in Missouri: Wins-
low, 16.

Mapping of Missouri: Winslow, 6.